Textile Industries

Formerly "COTTON"

a W. R. C. Smith publication

MARCH, 1954

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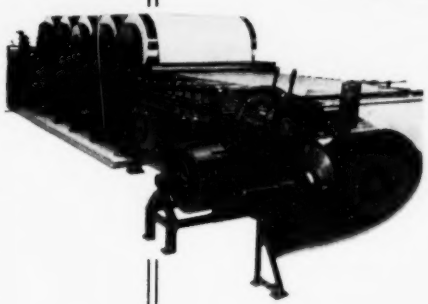
Next Month: Preview of the big ATLANTIC CITY SHOW

The Cocker High Speed
9-Cylinder Slasher

Produces More Pounds
of Quality Weaving Warps
Per Hour on
All Types of Yarns



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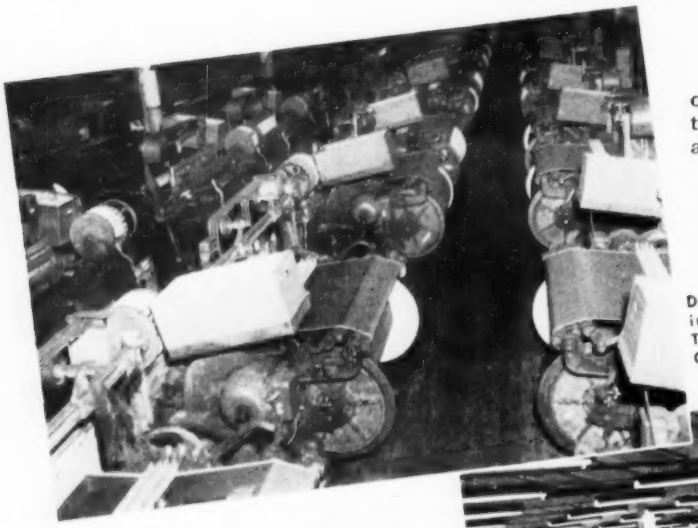
is assuring maximum weaving efficiency in leading mills



Thousands of Diehl Power Transmitters are operating DRAPER LOOMS in leading textile mills. Many have been in continuous operation for five years.

Draper X2 looms operating with Diehl Power Transmitters in Cone Mills Corp. Plant

Draper XD looms operating with Diehl power Transmitters at Bibb Manufacturing Company, Columbus, Georgia.

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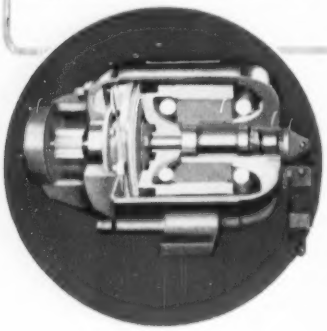
- Eliminates current regeneration.
- Simplicity and ease of maintenance.

. . . all of which adds up to increased mill production, improved quality of cloth, lowered operating costs and long, trouble-free service.

We will welcome an opportunity to tell you—without obligation—how the Diehl Power Transmitter can bring these benefits to you.



This cutaway view illustrates the inverted construction of the power transmitter and shows the rotor which revolves around the outside of the stator on a hollow shaft—providing the essential inertia without the disadvantages of a separate fly wheel. Note the pinion driving shaft with attached clutch-plate which is shifted axially by simple lever at front end of motor, regulating clutch engagement pressure and providing controlled driving and braking action.

TEXTILE MACHINERY AMERICAN ASSOCIATION EXHIBITION ATLANTIC CITY APRIL 26-30 1954

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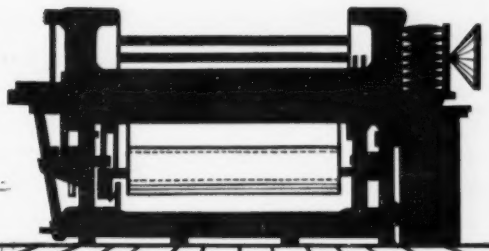

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Textile Industries

Vol. 118, No. 3
March, 1954

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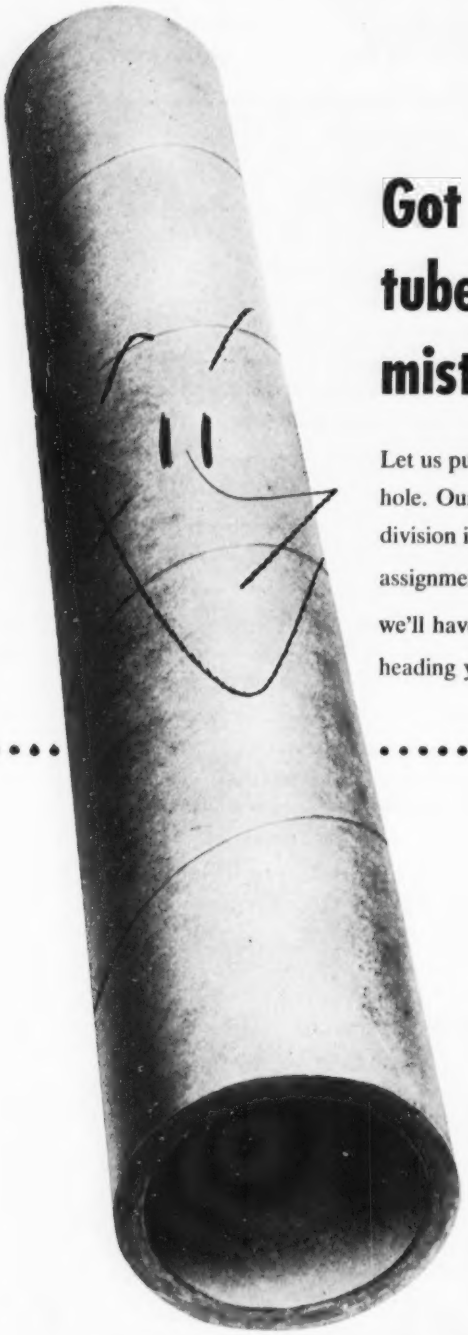

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Shorts and Remnants

► Beware the Ides of March. There's no particular reason to beware, except that our Kink Contest (see page 179) ends then and it's time to square up with Uncle Sugar for last year's income—and besides, people have been bewaring since Bill Shakespeare made soothsayers important and forecasting popular.

► And even the soothsayers didn't tell us when we got in this technical publication field that one day an author would offer a manuscript to us dealing with the "Golden Links of Love." TI's readers may be disappointed at our rejection. Nor could we use the story suggested by a field editor, "Love Life in the Slasher Room."

► That's the trouble with publishing— too many disappointments. Like the professor who offered his services to translate correspondence from Russian into English. A noteworthy enterprise, to be sure, but by the time we have the translation and then answer the man, some of his Russian habits may have stopped—like breathing.

► Credence was lent to the February "Gin-Damaged Cotton" story when, after the issue was on the press, a correspondent offered a story on a water-powered cotton gin still in operation. That would make some modernization story; and in this atomic age.

► But the Blue Moon hosiery girl (trademark) has been modernized. You remember her since the early 20's from the decalcomanias on auto windows, raincoats, sweaters, college dormitories, and army barracks. Her hairdo and other anatomical changes have been effected to reflect the freshness and wholesomeness of the typical American girl—small wonder immigration quotas are increased.

► In Hartwell, Ga., another modernization program that caused much celebration was the funeral of the CIO, acted out with full ceremony. The epitaph reads, "Gone, Never to Return." Local papers and locals, please copy.

► The parent's corner. Psychologists at Johns Hopkins say junior will

HERE'S HOW PROGRESS IS MADE...

FIRST: Research finds out *what* can be done to satisfy a given need.

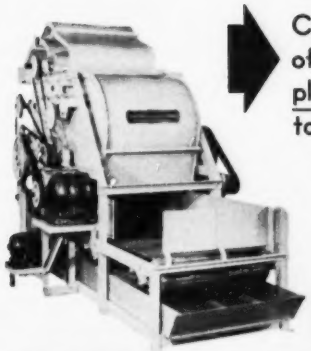
SECOND: Established manufacturing skill finds out *how* it can be done best.

AN EXAMPLE:

The Southern Regional Research Laboratory found out what could be done to effect perfect separation of textile fibers.

CEN-TENNIAL COTTON GIN COMPANY found out how best to do it—and did it! Only CEN-TENNIAL'S Textile Fiber Opener includes the SRRL principle with the many mill-demanded improvements required to make a fool-proof, efficient machine.

CEN-TENNIAL now incorporates more than 60 machine years of experience in their Textile Fiber Opener. This experience, plus the many mill-demanded improvements in the SRRL prototype, costs you no more!



OPENS, CLEANS, BLENDS } *COTTON, WOOL, SYNTHETICS*

TEXTILE MACHINERY EXHIBITION — AMERICAN ASSOCIATION — ATLANTIC CITY APRIL 26 1954

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for C & K and Draper Looms

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Shorts and Remnants

get better marks in school if the classroom has a southern exposure, a light blue background and pastel rose wall pattern, and a green chalkboard.

► Empty your warehouse. A unique plan to turn surplus merchandise into cash is being introduced by a new publication, "Excess, The National Journal of Surplus." It will list all types of new and unused surplus merchandise for sale or for purchase. Listings are free. Further information is that "Sellers pay a commission. Buyers pay nothing." Mill men contend that buyers have already paid nothing for sometime.

► Report from Abroad (one word): Paris. Men's wear firm opened a dance floor. Women artists serve as

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Ole S&R this month takes a generous turn. Readers are offered free one copy of any five of the following reprints, so long as the supply lasts. Check the five articles you wish, tear out the form, and mail to:

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"Textile Industries"
806 Peachtree Street, N.E.
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(Please check only 5. Readers will be served from a limited supply on a first-come first-served basis. To expedite handling, please DO NOT use the Handy Return Card for this purpose.)

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( ) Symposium on Core Testing Wool
( ) Pepperell Uses Pearl Starch (homogenization)
( ) A New Approach to Effective Lint Collection
( ) Permanent Magnetic Separators for Textile Applications
( ) Renewed Interest in Cut Meters
( ) Compressive Shrinking
( ) Huntsville's New Power System
( ) Spinning Fur Blends on the Cotton System
( ) The Harris Color Stripping Process
( ) Natural Fibers Crimped to Order (Textralizing)
( ) A Review of Literature on Neps
( ) Film Strip Facilitates Rapid Estimation of Wool Fiber Fineness
( ) Trends Indicated in Industry Area Survey (pre-employment exams, hospitalization insurance, mill doctors, public relations, employee publications)
( ) Loom Reconditioning Program at Tallassee Mills
( ) Material Handling at Borden Mills
( ) Value of Appraisals for Insurance Coverage
( ) Aw, Rats!! (rodent control)
( ) Measuring Shuttle Tension
( ) How Joanna Reduced Waste
( ) More and Faster Hosiery Identification at Bryan Full Fashion Mills
( ) The Maintenance and Operation of Cotton System Warping Equipment
( ) Huntsville's Vibration Problem Solved
( ) Starch Handling at Pineville
( ) A Progress Report on Cotton in Tricot Knitting
( ) Narrow Fabric Looms Modified
( ) Parade of Pensions
( ) Activity Vector Analysis
( ) Efficient Blending of Raw Stock at Shelby Cotton Mills
( ) From Carpets to Duck in Record Time
( ) Dusting Cotton Bales as a Fire Control Measure
( ) Handling Wool Stock in the Dyehouse
( ) Figure Evenness by Machine or Planimeter?
( ) Hydraulic Carton Press Simplified Packaging of Cloth
( ) Tubular Knit Goods Conveyor Profitable Investment
( ) Instrument for Studying Drape
( ) Quality Control of Cotton Fibers
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( ) Wamsutta Simplified Processing in Sheet Factory

Your name .....
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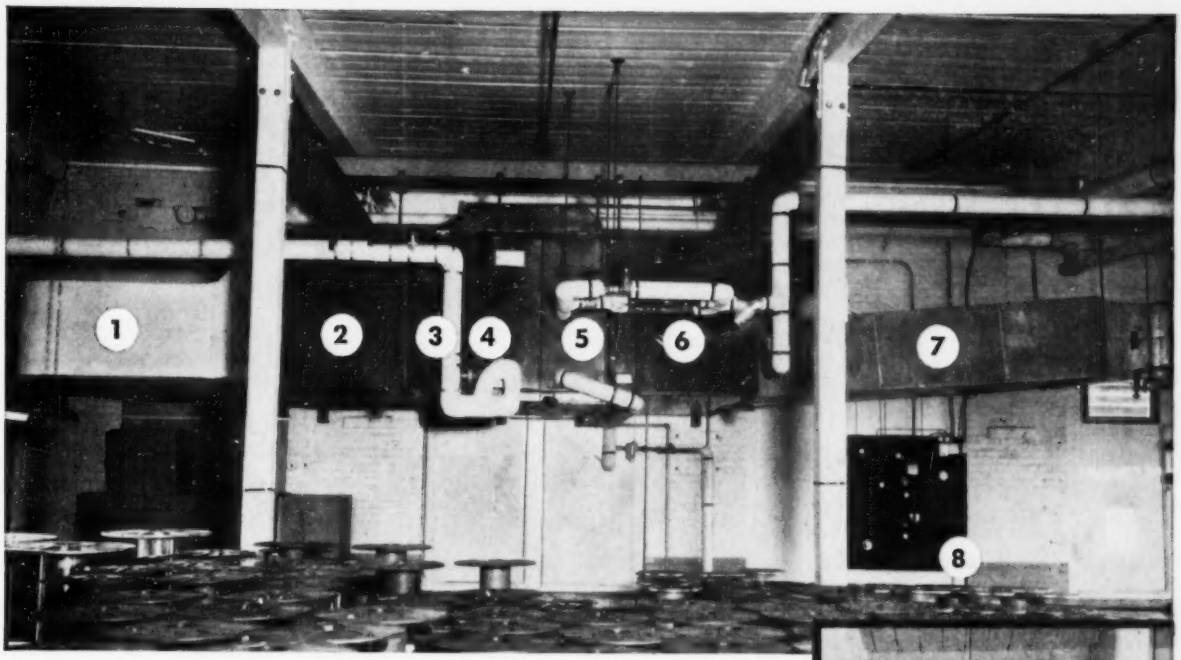
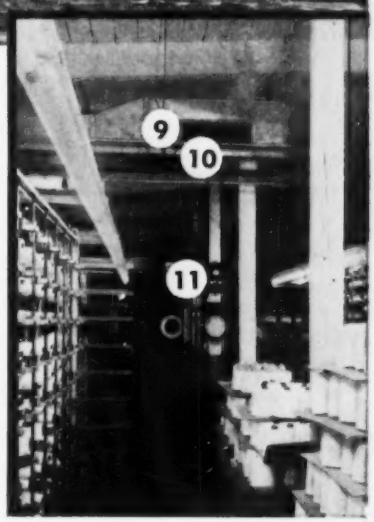
Your company .....
Address .....
City ..... State .....

Watch for another list to be published soon.



Amco Unit Dry-Duct System installed at Raytric Knitting Mill, Inc., Bristol, Conn. Shown here are (1) fresh air inlet from outdoors; (2) plenum chamber, showing recirculated air louvers underneath; (3) air filter; (4) heating coils; (5) cooling coils; (6) fan; (7) air duct; (8) control panel; (9) outlet in air duct; (10) atomizer; (11) humidity control



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This compact AMCO Unit Dry-Duct System may be your answer

An Amco Unit Dry-Duct System is composed of a self-contained air conditioning unit, distribution ducts and room atomizers. The unit itself is compact and can be installed overhead, out of the way, where it will not take up valuable mill floor space.

Here's how it operates. Automatically operated louvers introduce into the unit fresh air and recirculated air in proper proportions. The air is filtered, if desired, and then heated as required. This "dry" air is distributed to the working area through ducts. Humidification is provided by room atomizers located in front of each air duct outlet. Spent air and heat is exhausted automatically through vent louvers.

Amco Unit Dry-Duct Systems operate with evaporative cooling *only*, or with cooling coils, as in the featured installation at Raytric Knitting Mill, Inc.

The Unit Dry-Duct System is but one of the many types of air conditioning systems which Amco manufactures, engineers and installs in textile mills. Amco is in the unique position of being able to give you the widest possible choice between humidification, evaporative cooling (central station, dry-duct, or ductless type) or refrigeration, alone or in combination. Call an Amco engineer. You can rely on him to give you advice on the system best suited to your needs.

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Here are some of the results:

- High narrowing speed . . . End control with its rigid construction allows a narrowing speed of 75 courses per minute — faster than the top operating speed of some machines now in use.
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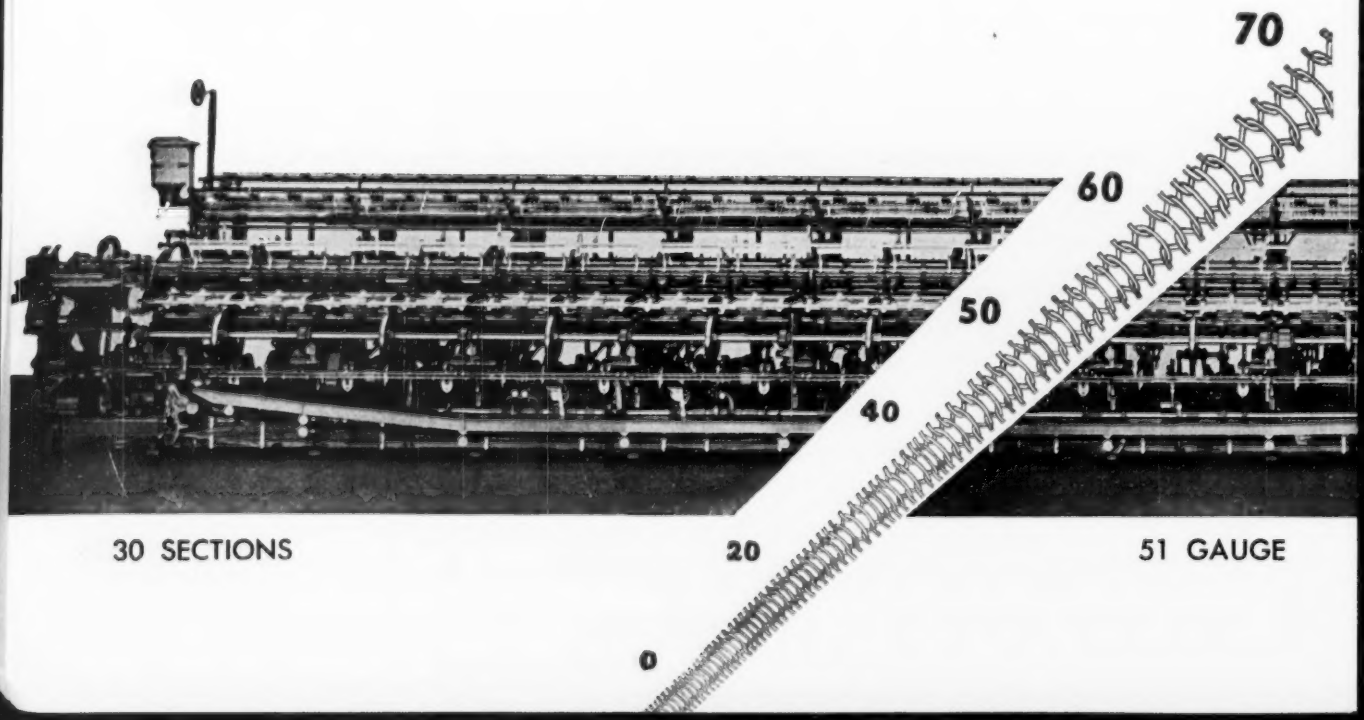
Let us show you how the new "Reading 100" will help you to stay competitive by producing the finest stocking fabrics — without interruption — at speeds never before achieved. See the new "Reading 100" in operation or write us for full details.



30 SECTIONS

51 GAUGE

interruption

100

95

90

85

80

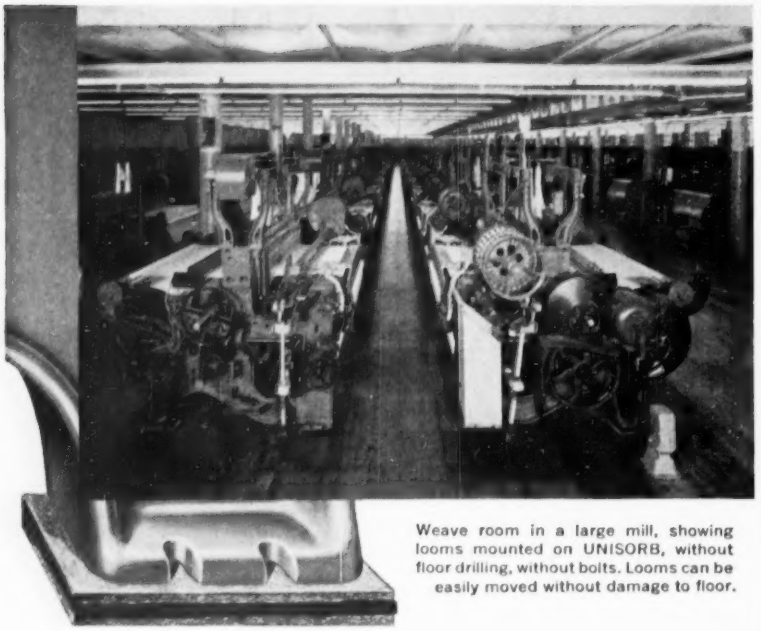
75

The "READING 100"
Full-Fashioned Knitting Machine

60 GAUGE

66 GAUGE

TEXTILE MACHINE WORKS
READING, PENNA., U. S. A.



Weave room in a large mill, showing looms mounted on UNISORB, without floor drilling, without bolts. Looms can be easily moved without damage to floor.

Another Textile Mill Mounts Looms on

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Shorts and Remnants

fashion advisors and entertainers.

Australia. Although ladies' hose were found in the husband's briefcase, the wife dropped the separation suit when he admitted no longer being a bank clerk, but a salesman for a full-fashioned mill.

England. American cowboy clothes were banned from school wear because of increased accidents; the cowboy suits led to dangerous games.

Singapore. Postmen struck when ordered to wear uniforms with red stripes; claimed they were suitable only for clowns.

Milan. Ties decorated with real color-photos brought from $80 to $100.

Switzerland. Ski-sportsmen maintain cellophane sportswear is more comfortable at 2000 meters than conventional textile attire.

Great Britain. Scientist develops process for crease-proofing men's socks, by treatment with rubber solution.

Zurich. Secretaries in a factory now wear black smocks; orders from the boss's wife after a visit.

France. Competition recently was among ladies for the "most beautiful and most beautifully carried" handkerchief.

Egypt. Countrymen have been ordered to invent a form of headwear which is more practical than the fez.

Sweden. Awnings are in the vogue which react from a photo-cell; down when the sun is up, up when the sun is down.

► This 'nd That. Last year, Americans ate more than their average weight in meat.

Peak year for bicycles was 1948 when 2,750,000 were sold.

The Norsemen originated the story that Santa comes down the chimney.

More than half the accidents in industry involve skin infections and could be prevented by washing hands oftener, says NFI.

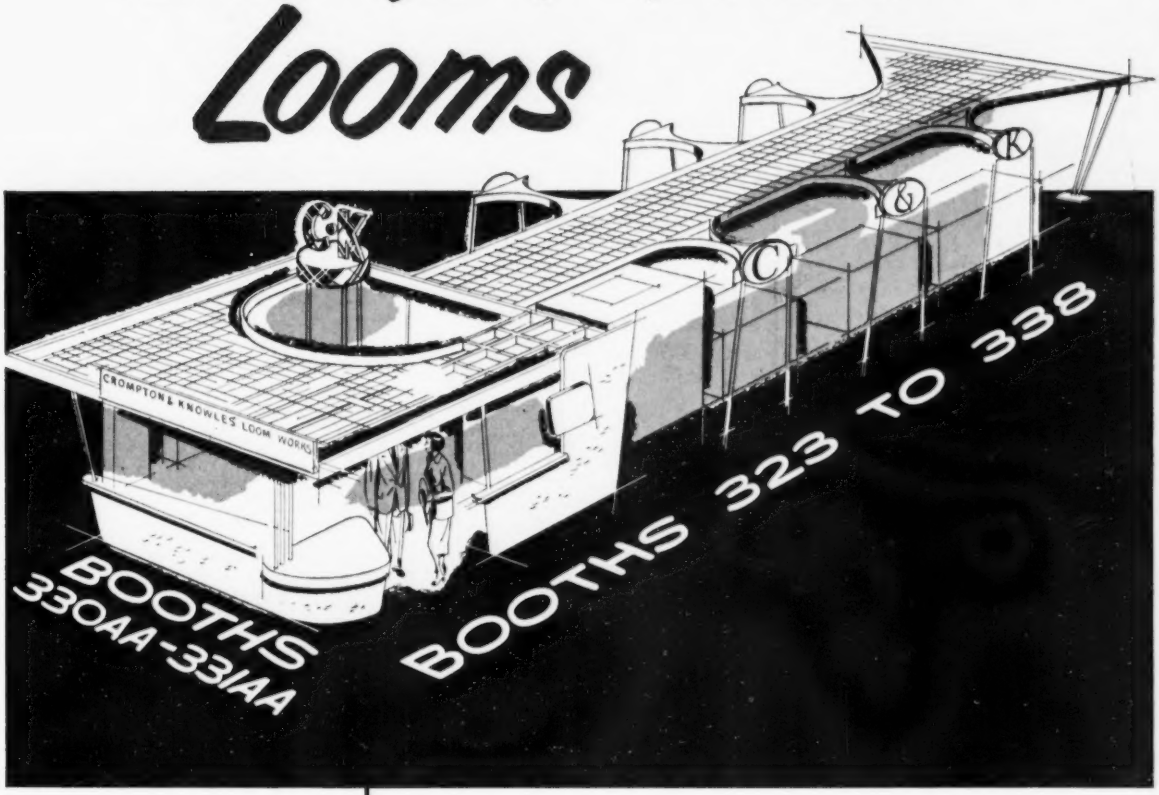
"Recession" is a bad word and should not be used in polite company.

Never discount the opinion of any man. Even a broken watch is right twice a day.

Ladies take up less space since the invention of the girdle.

► Quote of the Month. Whenever two competitors start calling each other names and low-grading each other's product, the public can be

Here's Where to See C&K's 7 New Looms



TEXTILE MACHINERY AMERICAN ASSOCIATION EXHIBITION
ATLANTIC CITY APRIL 26-30 1954

Booths 323 to 338
330AA to 331AA

One of the largest and most easily distinguished exhibits at the Atlantic City Show, C&K's *Pavilion of Progress for the Weaving Industries* will feature 5 new looms never shown before:

1. Weaving gray flannel filling mix.
2. Weaving 2-color denim automatically.
3. Weaving 4 x 1 filament dress goods automatically.
4. Weaving 4 x 1 spun rayon blends.
5. Weaving 2 x 1 upholstery fabrics.

Also a new Narrow Fabric Loom . . . a new W-3A Loom automatically producing many pick-and-pick weaves . . . and one of C&K's latest Jacquards. So get the biggest news of the show as soon as you get there . . . at the modern C&K exhibit shown above.

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. · Charlotte, N. C. · Allentown, Pa.

Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Fabrics . . . which are **WOVEN** Fabrics.

the helping hand to better weaving

G&K

Spin-Tex® Leather Spindle Bumper Straps are now slipped on in a few seconds!

No more pulling . . . no more pounding . . . no broken fibres! The new G&K Spin-Tex Spindle Bumper Strap is now *preform-mounted.* Just slide it off the dowel and onto the spindle!

Spin-Tex Straps are made of lively, resilient, tough center-stock Hairitan® leather with tightly-woven fabric cemented between the plies. They absorb the impact of the picker without bouncing . . . last longer . . . save pickers . . . help produce better yardage at lower cost. *And they're easier to install!*

FREE CATALOG: Shows the great Orange Line of Textile Leathers for weaving — also Aprons and Tapes.

GRATON & KNIGHT COMPANY
Worcester, Massachusetts
DIXIE LEATHER CORPORATION
Albany, Georgia

GRATON AND KNIGHT® Orange® Line
Estab. 1851 T-2

TEXTILE LEATHERS

Shorts and Remnants

expected to believe both.

► The free offer of reprints (see page 6) is no joke. Take your pick of five, and hope the supply lasts and that your letter is one of the early ones. Forget not the big show in Atlantic City next month, and Keep Your Eye on TI.

Sorry No Seam

" . . . kindly forward to me two reprints of the article 'Training Seamer Operators' by Sam Boyer which appeared in the April 1953 issue . . . "

D. P. WILLIAMS
Prestige Ltd.
Martinborough, Wairaraka
New Zealand

► Sorry, demand took all our reprints.

Stafford Cutter

" . . . if you have a loom fixing book on setting Stafford thread cutters. . . "

L. T. ROBERTS
Clinton, S. C.

► Draper Corporation, Hopedale, Mass., can supply information.

New Fibers to France

" . . . interested in article 'New Textile Fibers Created by Reaction of Cotton with Acrylonitrile' . . . appreciate 20 copies. . . "

S. TUROVER
William R. Haas Consultants
Paris, France

New Fibers to Texas

" . . . would like to obtain copies of article 'New Textile Fibers Created' by ITT . . . published in October . . . "

K. T. LOUIS
Otto Goedecke, Inc.
Hallettsville, Tex.

Materials Handling to India

" . . . interested to read reference to article 'Materials Handling Methods' from September 1953 TI . . . desire to have a complete copy . . . "

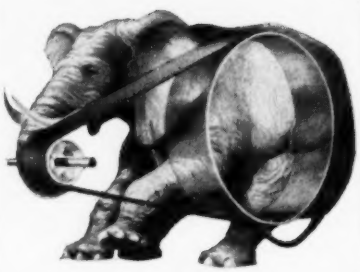
GUJARAT TRADING SYNDICATE
Bombay, India

Checking Elevators

" . . . would it be possible to secure three reprints of your article 'Pictorial Check List of Elevator Maintenance' appearing in the January 1954 edition. . . "

FRANK B. PITT
Safety Director
A. & M. Karagheusian, Inc.
Freehold, N. J.

PULLINGRIP



G&K

Leather Belting grips the pulleys for more production-power

It Grips — Like an elephant's trunk, leather's resilient, frictional surface *grips* the pulley face, causing belt and pulley to move as one power unit.

It Pulls — Leather is strong, flexible, with controlled stretch—gives peak performance on *any* drive.

It's 3-Dimensional — Leather's millions of fibres are interlaced in all directions to form the tough *three-dimensional* structure so necessary for PULLINGRIP — *developed to the highest degree in G&K Leather Belting.*

Call your G&K Industrial Supplies Distributor for flat, round, link and V-belting, belt lacing, dressings, cements, packings and specialty leathers . . . made by Graton & Knight, the world's largest manufacturer of industrial leather products.

Catalog 101 shows RESEARCH®, HEART OAK and SPARTAN® Leather Belting — also special belting for Stripper, Spindle and Universal Winders. It's free.

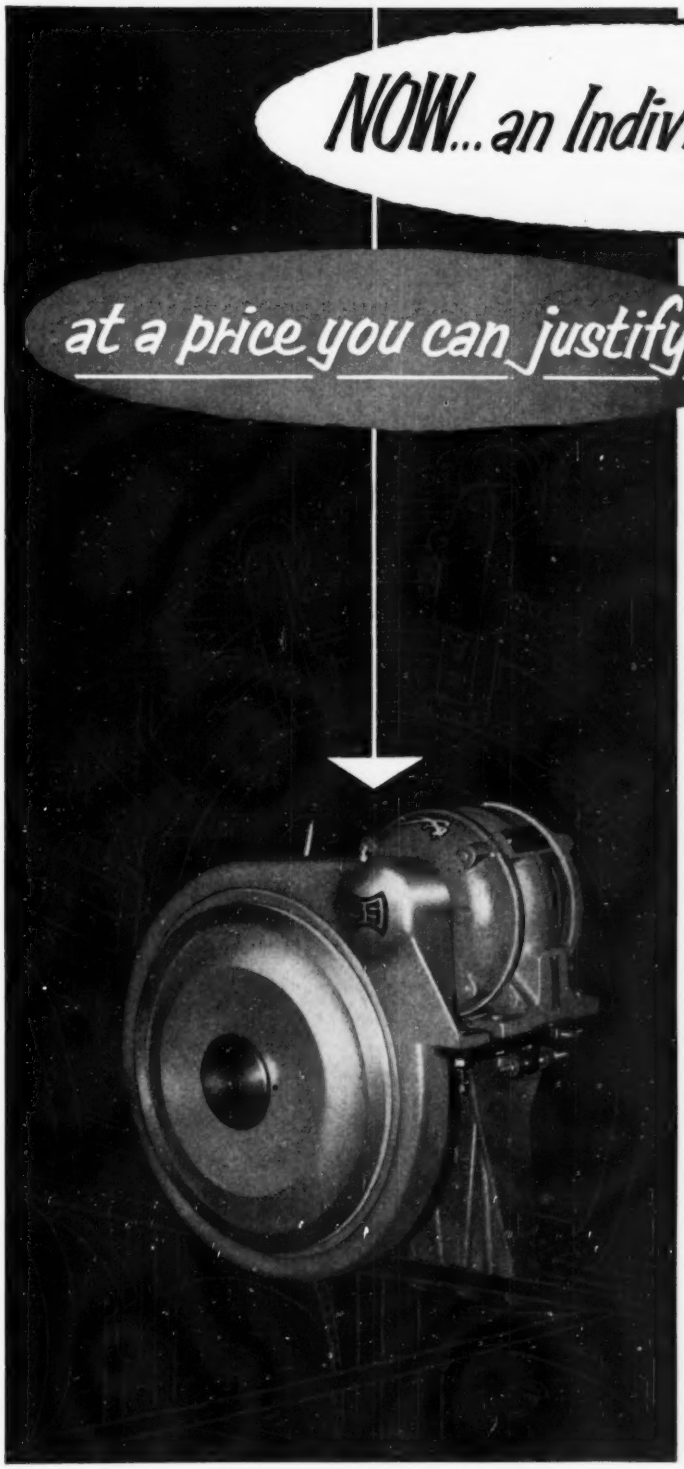
GRATON & KNIGHT *Company*
WORCESTER, MASSACHUSETTS

Engineered GRATON AND KNIGHT®
8-9 Estab. 1851

LEATHER BELTING

NOW... an Individual Card Drive

at a price you can justify



Here is a new individual card drive.
Not only is the first investment for this drive low, but its simple time-tested principle assures little, if any, maintenance cost.

THIS DRIVE MAINTAINS STANDARD CARD OPERATING PROCEDURE AND PRESENT METHOD OF STRIPPING, eliminating cost of separate stripping devices and dangers inherent in training personnel in new methods. The operation, in addition to being easier and more quickly executed, is safer than ever before.

MILLS EQUIPPED WITH THIS DRIVE CAN STANDARDIZE CARD PRODUCTION since the slippage associated with any type of belt drive has been eliminated. It embodies the advantages of direct drives plus the slip-clutch safety to prevent possible damage from chokes.

AS A PACKAGED UNIT, this drive is easily and quickly installed. It is fitted with a rigid mounting direct to the card frame with no complicated reduction unit or overhung load on the cylinder shaft. Occupying approximately the same space as existing flat belt drives, this drive leaves the flats clear and eliminates the danger of springing arches or damage to flats due to vibration.

Now you can reduce the production loss of group shut-downs and eliminate the accidents and costly maintenance associated with belts and line shafts.

If you haven't seen this drive, contact your nearest Southern States representative or write today for Bulletin No. 200.

All the parts necessary for continuous stripper drive can be supplied at moderate extra cost.

Southern States
HAMPTON

SS

Equipment Corp.
GEORGIA

The one apron made

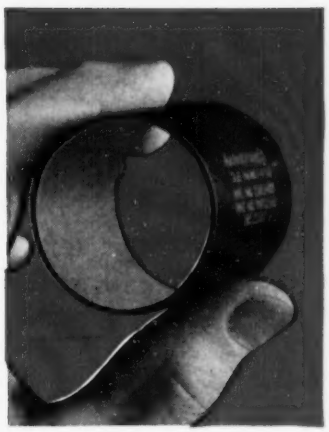
NO SLIPPAGE HERE
Black outer face has the right friction to keep the top apron moving smoothly. This prevents yarn irregularities which occur when aprons slip at points of contact.

RUNS CLEANER HERE
White inner face won't attract loose fibers, doesn't tend to build up excessive waste inside the apron.

RUNS SMOOTHER HERE
Carefully regulated surface friction of inner face allows smooth, sure transfer of power from driving roll to apron, yet prevents jamming or buckling at the pins.

ARMSTRONG'S ACCOTEX

expressly for frames with close-pin cradles



Armstrong's NO-7075 Apron

- *eliminates top apron slippage*
- *runs cleaner inside*
- *runs smoother inside and out*

The newest double-apron frames have pins set closer together than ever before. To get the best possible yarn with these new frames, you need an apron specially designed for close-pin cradles . . . Armstrong's NO-7075 Accotex® Apron.

Compared with conventional aprons, the NO-7075 has shown three decided advantages. First, the black outer face has enough surface friction to keep the top apron running smoothly without slippage—and without yarn irregularities.

Second, the NO-7075's white inner surface has the smoothness needed to slide over the pin without jamming or buckling. Yet it still has sufficient friction to grab the drive roll and keep drafting tension right.

This white inner surface also runs clean—cleaner than you've ever seen an apron run. Special electrolytes added to this rubber compound tend to repel loose fibers and keep them from forming hard-to-clean deposits inside the apron.

In addition, the NO-7075 has all the qualities you expect in an Accotex Apron—tear and abrasion resistance, excellent flexibility, and a cord interliner that absolutely prevents stretching or curled edges.

If your frames have close-pin cradles, or if you're planning to install them, this newest Armstrong apron can make a difference in yarn quality and downtime. To arrange a test of NO-7075 aprons in your mill, ask your Armstrong man or write Armstrong Cork Co., Textile Products Department, 6403 Ivy St., Lancaster, Pa. Available for export.

APRONS

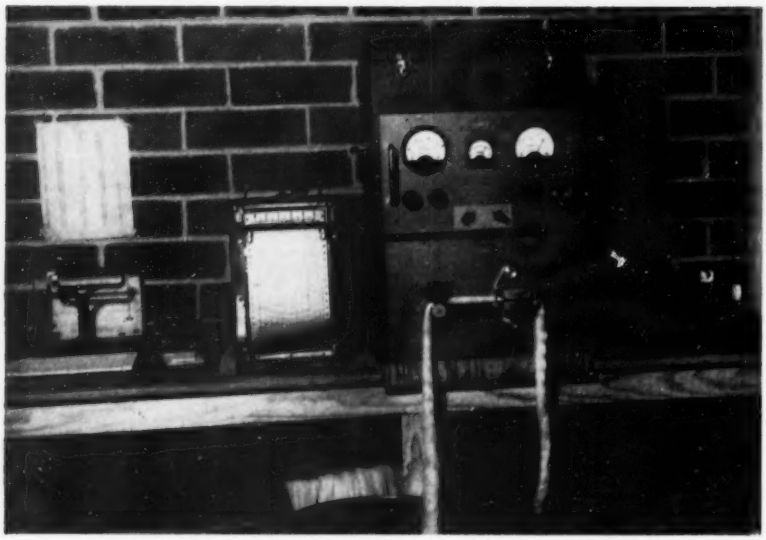
A complete line of top-quality aprons

FOR CLOSE-PIN CRADLES. The NO-7075 apron gives you smooth, clean operation on the latest type equipment.

FOR SINGLE-APRON SPINNING. The super-flexible NO-750 insures smooth slip-roll action needed for uniform yarn.

FOR DOUBLE-APRON SPINNING. The NO-700 Accotex is smooth and long wearing, first choice in hundreds of mills.

FIELDEN Yarn Evenness Tester



PREVENTS LOSSES FROM UNEVEN YARN

With this instrument you can detect uneven yarn, due to machine or fiber faults, and correct the cause at once.

The Fielden Evenness Tester, Recorder, and Integrator is saving many mills its cost many times over by helping prevent loom stoppage traceable to yarn faults, and second quality cloth due to poor warps or filling.

- This one instrument is your laboratory to measure yarn evenness at any stage in processing. No costly technical laboratory is needed.
- Because of its simplicity, trained laboratory workers are not required. Ordinary spinning and winding room help can operate this Fielden instrument. Control is by one knob only, making operation as easy as that of a TV set.
- Takes everything from the heaviest slivers to the finest filament yarn.

Fielden Yarn Evenness Tester, Recorder, and Integrator operates on a capacity or dielectric principle, using the Fielden Bridge System, and provides the perfect parallel electric field essential for accuracy. Once in balance it remains in balance.

Scores of Fielden Yarn Evenness Testers are in use by leading mills and commercial spinners. The president of one mill states:

"It has proved invaluable. Its use made possible the discovery of a repetitive fault not apparent to visual examination. Has minimum of adjustments. Less costly than other testers."

With competition growing keener, you cannot allow uneven yarns, bad warps, and excessive seconds, to remain undetected and unchecked.

Mail the coupon today for full details of how Fielden Yarn Evenness Tester, Recorder and Integrator can save you thousands of dollars a year.

MAIL COUPON FOR COMPLETE INFORMATION.

Fielden INSTRUMENT DIVISION
ROBERTSHAW-FULTON CONTROLS COMPANY
2920 North Fourth Street Philadelphia 33, Pennsylvania

NAME.....

COMPANY.....

ADDRESS.....

Personal NOTES
ABOUT MEN YOU KNOW

William T. Galey, Jr., recently celebrated a half-century of association with the Aberfoyle Manufacturing Co. In 1939 he was elected president; now he is chairman of the board.

John T. Gibbons has been made president of The Absorbent Cotton

Mr. Gibbons

Co. He joined the firm in 1941 as executive vice-president.

John B. Love, formerly assistant to the agent of the mill, has been named assistant manager of Willimantic (Conn.) Mills of American Thread Co.

William Muir, vice-president in charge of American Woolen Company's worsted operations, has retired, having been in the textile business about 40 years.

Joseph A. Etchells is now superintendent of finishing at Bachmann-Uxbridge Worsted Corp.'s Cedartown, Ga., plant.

Charles E. Coleman has been added to the chemistry department of the research and development division of Callaway Mills Co., LaGrange, Ga. Previously Mr. Coleman was with Pacific Mills. **R. L. Wallace** has been promoted to overseer of the spinning, spooling, twisting, and winding departments of the Valway plant; **Fred L. Hunter** is now overseer of the raw stock dye and scatter rug finishing department at Valway.

Bert Joss, formerly of Viking Hosiery Co. and Nursewear Hosiery Co., is now vice-president in charge of production for Debonaire Hosiery Mills, Inc. He will be responsible for output of the company's mills in Chestertown, Md., and Lewes, Del.,

THE INDUSTRY ASKED FOR:

Levelness and good penetration in package dyed woolen and nylon yarns

Sandoz supplied the answer:

EKALINE F

EKALINE F, a nonionic dyeing assistant developed by Sandoz, is especially effective in package dyeing woolen yarns and nylon yarns. Excellent migration is obtained through its use, resulting in good penetration and levelness.

A nonionic fatty polyethylene glycol ether, EKALINE F is applicable on all fibres and stable to strong acid or alkali at the boil. It is compatible with anionic, nonionic and cationic compounds. EKALINE F has proved effective when used with Xylene Fast "P" colors, Brilliant Alizarine Milling colors, Lanasyn dyestuffs and Sandonyl dyestuffs.

Applications: In addition to package dyeing, EKALINE F is useful in many other specific dyeing applications. For example, hosiery dyers using acetate colors for nylon full-fashioned hose also find EKALINE F a great help in obtaining a good union between the multifilament welt and the mono-filament boot even at high temperatures.

Another interesting application is in the dyeing of woolen fabrics containing viscose decorations. These can be dyed with Vitrolan colors by adding 1% EKALINE F to replace approximately one half of the usual amount of sulphuric acid.

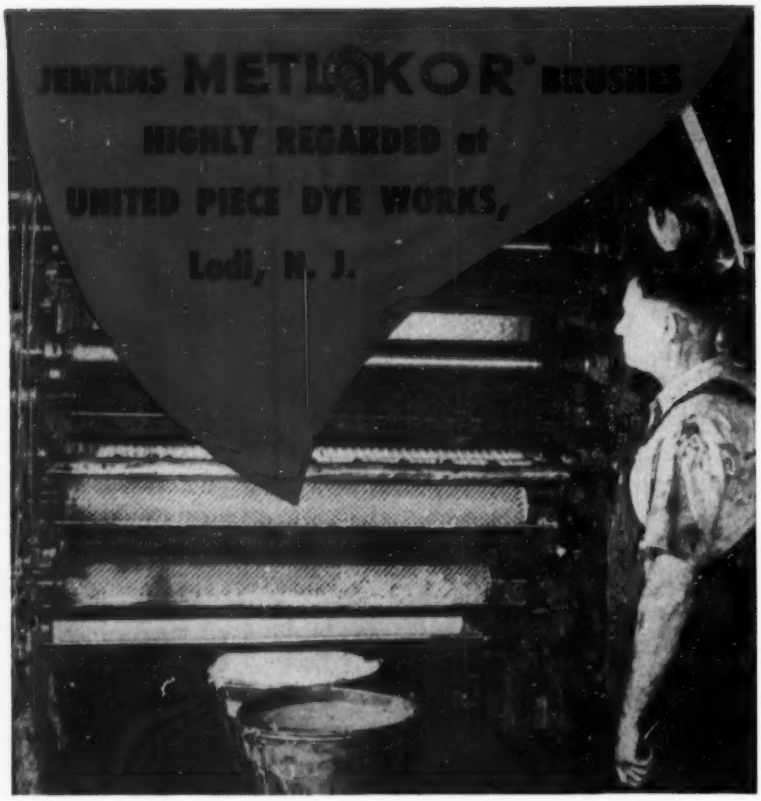
For full details and additional application data, write for your free EKALINE F folder. Sandoz branches are in Hudson, Mass.; Providence; Fairlawn, N.J.; Philadelphia; Charlotte; Cincinnati; Los Angeles; Montreal; Toronto. Sandoz Chemical Works, Inc., 61 Van Dam Street, New York 13, N.Y.

8.3.5

SANDOZ

SANDOZ

THINKS AHEAD WITH TEXTILES

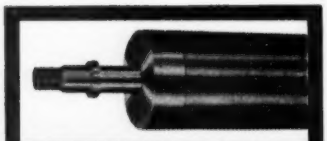


Mr. M. K. Emerson, U.P.D. vice-president in charge of printing, says they "are more than happy" with the Jenkins METLKOR Brushes which replaced other types of applicator rolls and brushes formerly used. And Frank Du Bois adds: "In any case, we wouldn't go back to the older type, less efficient brushes for anything in the world."

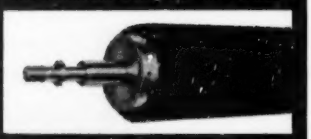
Such commendations from men who know, who demand the best brushes for a given job, is further assurance that you, too, can be certain of getting *the best brush for every textile brushing application* from Jenkins.

Our engineering services are available for analysis of your brush problems without charge or obligation.

Write or telephone your brush requirements.



The new METLKOR has stainless steel end plugs, is lighter, more corrosion-resistant. The stainless steel gudgeons and aluminum tubing are still retained.



This Nylon-filled Jenkins METLKOR furnisher brush shows the new and improved bronze end ring and stainless steel end plug.

M. W. JENKINS' SONS, INC.

Over Three-Quarters Century of Pioneering Brushes for Industry.

Cedar Grove, Essex County, New Jersey

Personal NOTES ABOUT MEN YOU KNOW

as well as the nine mills under contract to Debonaire and Debonaire's finishing plant in Passaic, N. J.

Henry C. Van Brederode has resigned as a vice-president of The Celanese Corp. of America to join N. Erlanger, Blumgart & Co., Inc., where he is directing market development activities.

Clinton (S. C.) Cotton Mills has a new cloth room overseer—**Millard Lee Poole.** Mr. Poole came to Clinton from the Grendell plant of Abney Mills.

The Charlotte, N. C., alumni chapter, Delta Kappa Phi textile fraternity, has elected the following officers: president, **Harold E. Meunier,** The Texas Co., Charlotte; vice-president, **Wallace L. Krueger,** R. H. Bouligny Co., Charlotte; and secretary-treasurer, **George H. Dockray,** TEXTILE INDUSTRIES, Shelby, N. C.

At its annual stockholders meeting, Erwin Mills, Inc., Durham, N. C., announced the election of **John S. Abney,** Greenwood, S. C., and **Hargrove Bellamy,** Wilmington, N. C., to the board of directors. Promoted to vice-presidents were **N. A. Gregory,** assistant treasurer, and **L. C. Thomas,** assistant secretary.

Edward C. Hayes was recently made superintendent of Faith Mills, Inc., Averil Park, N. Y.

Jason M. Elsas was recently named to the newly-created post of executive vice-president of Fulton Bag & Cotton Mills. Named to the board of directors was **William N. Banks** of Newnan, Ga.

Lawrence J. Williams, TEXTILE INDUSTRIES circulation representative in the Carolinas for several years, has been elected president of General Textiles, Inc., Charlotte, N. C., a selling agent for six textile mills.

Robert A. Liner has been appointed assistant superintendent of the Durst Plant of Greenwood Mills. **W. Troy Harris** is overseer of carding.

Overseer of Spinning Room No. 1 at Joanna (S. C.) Cotton Mills Co. is **Walter Waits.**

Officers elected to serve the Philadelphia Section of AATCC during 1954 are: chairman, **Frederick V. Traut** of Globe Dye Works; vice-

for better SANFORIZED FABRICS insist on BALANCED TWITCHELL OILS®

It's the Balanced Combination of Properties... THAT COUNTS!

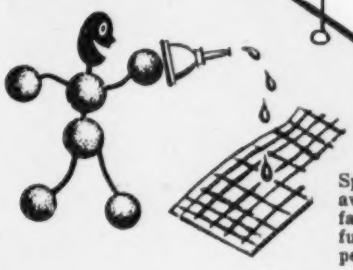
Twitchell Oils not only give you outstanding rewetting, but they provide the perfect balance of essential characteristics for better Sanforized fabrics at low cost. Prove this in your plant by ordering enough for a week's run today!

Faster production through
FAST REWETTING

With Twitchell Oils, fabrics wet back rapidly and uniformly. And, full effectiveness is retained even when treated fabrics are stored for long periods ...thus assuring maximum throughput per range under all conditions.

Better Sanforized fabrics through
FREEDOM FROM STAINING

Fabrics smell better, look better to the buyer because of the high stability of Twitchell Oils. Treated fabrics possess maximum resistance to rancidity, yellowing or staining with age... remain fresh and appealing longer.



Faster production through
BETTER FIBER LUBRICATION

Speed slowing sticking at the shoes is avoided. Rejects or re-runs because of fabric distortion are minimized...thus further assuring maximum production per range.

Better Sanforized fabrics through
SOFTER HAND

Twitchell Oils offer a range of softness to give you the hand you want, the hand that appeals to buyers. This fourth property of softness permits a reduction, or in many cases a complete elimination of softening agents.

Emery

Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers

Emery Industries, Inc., Carew Tower, Cincinnati 2, Ohio

New York • Philadelphia • Lowell, Mass. • Chicago • San Francisco
Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles
Export: 5035 RCA Bldg., New York 20, New York

Choose the Twitchell Oil that Best Meets Your Requirements

Twitchell 7231—(All Mineral) Best for heavy starch finished and heavy-weight fabrics such as denims and other work clothing.

Twitchell 7240—(Fatty-Mineral Blend) offers the lubricity of mineral oils plus the hand of fatty oils at low cost. Best for all-purpose work.

Twitchell 7250—(All Fatty) Best for maximum rewetting speed, and for shirtings, dress goods and other light-weight, bright-color work where stability and softness are essential.

announcing
GULFTEX OIL A
-the ideal needle oil

- resists gumming
- helps keep needles clean and smooth
- easily washes out of fabrics
- helps prevent buildup of size

Out of Gulf Research Laboratories has come another outstanding textile lubricant —Gulftex Oil A, the ideal needle oil.

In tests conducted at several leading full-fashioned hosiery mills, Gulftex has proved that it will aid effectively in keeping needles clean and smooth, thus contributing to smoother knitting and fewer seconds.

Gulftex also has outstanding nonstaining characteristics as proven in scores of fade-o-meter tests, and easily washes out of fabrics.

It may be sprayed on the needles or applied with a brush.

Developed primarily as a needle oil, Gulftex may also be used as a sewing machine lubricant, especially where the staining of fabrics is a problem.

Why not have a Gulf Sales Engineer demonstrate the advantages of Gulftex Oil A in your mill now? You can reach him simply by contacting your nearest Gulf office.

GULF OIL CORPORATION
GULF REFINING COMPANY
1822 GULF BUILDING
PITTSBURGH 30, PENNSYLVANIA

GULF SERVES INDUSTRY

Look...the New 40A RIDGID Tristand

with built-in folding tray

Tray pushes up easily to fold Tristand, pushes down easily to set up. Holds stand rigid.

Vise base overhangs front legs so threader handles swing clear. Perfect tripod and balance.

Folds up small as ever for easy carrying to job and it's extra lightweight.

The Tristand you've been wanting. Now stand and tray all one unit—no loose parts. Extra-light weight, stronger more rigid than ever. Full size vise base—3 benders, ceiling brace screw, pipe rest, new tool-hanging slots. Designed for the utmost service for your money. See the new RIDGID 40 A Tristand at your Supply House! Immediate deliveries!

THE RIDGE TOOL COMPANY • ELYRIA, OHIO, U.S.A.

RIDGID

Work-Saver Pipe Tools

Personal NOTES ABOUT MEN YOU KNOW

chairman, **Thomas H. Hart** of Hart Products Corp.; treasurer, **Percival Theel** of Philadelphia Textile Institute; secretary, **Thomas J. Scanlon** of Dexter Chemical Corp.

Newly elected president of the National Association of Finishers of Textile Fabrics is **Walter R. Howell,** executive vice-president of Bradford Dyeing Association, Bradford, R. I. Mr. Howell succeeds **Sydney M. Cone, Jr.,** of Cone Finishing Co., Greensboro, N. C., who replaces **Arthur G. Poor** as chairman of the executive committee. Other officers elected were: vice-president, **J. Marshall Cole,** Cold Spring Bleachery, Yardley, Pa.; and vice-president, **George Sinkinson,** Sayles Finishing Plants, Saylesville, R. I.

Howard Wilcox has left Kenwood Mills, Cavendish, Vt., to be boss carder at Lobsitz Woolen Mills, Nutley, N. J.

Floyd W. Stedman has resigned as superintendent of the dyeing and finishing departments of Knit-Sox Knitting Mills, Inc., Hickory, N. C.

Officers elected to serve the Pennsylvania district of the Knitted Outerwear Manufacturers Association during 1954 are: president, **Max Falik** of Charles Peberdy & Sons; first vice-president, **Martin J. Feld** of Novelty Knitting Mills; second vice-president, **Gideon Frankel** of Union Knitting Mills; treasurer, **David Rosenblatt. Dr. Edward B. Shils** was redesignated executive secretary, and **H. H. Cohen,** counsel.

Lowell Technological Institute has announced the promotion of **John A. Goodwin,** head of the cotton department, to the post of associate professor.

National Safety Council has announced the election of the following officers in the textile section: general chairman, **Charles L. Trommer,** chief, safety branch, personnel department, Mohawk Carpet Mills, Amsterdam, N. Y.; vice-chairman, **H. S. Baucom,** safety director, North Carolina Industrial Commission, Raleigh, N. C.; secretary, **Arthur Kinsman,** Walter V. Clark Associates, Barrington, R. I.

New Bedford Institute of Textiles recently awarded four honorary master of science degrees: **William A. Karl,** president of Firestone Textiles;

Up Against A Card Room Problem?

CARD CLOTHING

For Example

One mill, faced with what its president called a "terrible mess in the card room," reported:

"Your man left us in a position to handle our job successfully and with a personnel that he had trained for us. Our weaving efficiency, now over 90%, is about 10% above what it was. We give him all the credit — what he accomplished would have taken us months to do."

IT'S wise, then, to turn to a TUFFER man. He'll be on the job — RIGHT IN YOUR OWN MILL— and help you work out a solution.

He'll come up with *workable* suggestions and recommendations to kick up production and at the same time improve the quality of your material.

You'll get that valuable ON-THE-SPOT PERSONAL ATTENTION that TUFFER men have been giving to textile mills for years.

Contact us direct at Worcester, Massachusetts, or at our Southern plants at Atlanta, Georgia or Gastonia, North Carolina. Your call will bring immediate action, without obligation.

B-2

Manufacturers of Card Clothing since 1866

See us at Booths 339-340
American Textile Machinery Exhibition
Atlantic City, New Jersey
April 26-30, 1954

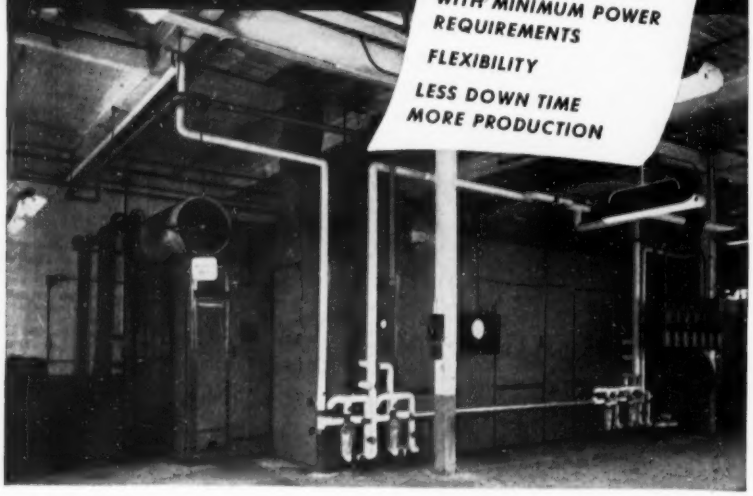
HOWARD BROS.

WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga., and Gastonia, N. C.
Direct Representation in Philadelphia, Pa., and in Canada

TUFFER PRODUCTS Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plants • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

Only the New
PROCTOR LOOP DRYER
offers you all this

- COMPLETE DRYING AND CURING UNIFORMITY
- MAXIMUM CAPACITY WITH MINIMUM POWER REQUIREMENTS
- FLEXIBILITY
- LESS DOWN TIME MORE PRODUCTION



In every mill where the new Proctor Loop Dryer-Curer has gone into operation it has met with enthusiastic acceptance on the part of mill management and operating personnel. Never before has any machine of this type so completely fulfilled the industry's requirements. Every feature in the design of the new Proctor Loop-Curer has been engineered to meet your needs. See an operating scale model at the Textile Machinery Show in Atlantic City. In the meantime write for Bulletin #394.

TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY APRIL 26-30 1954 — AMERICAN TEXTILE MACHINERY ASSOCIATION

OTHER PROCTOR EQUIPMENT FOR THE TEXTILE MILL

- Automatic Blending Systems
- Weighing Feeds
- Pickers
- Shredders
- Bale Breakers
- Carding Machinery
- Garnetts
- Dryers for Fibrous Material
- Squeeze Rolls
- Yarn Dryers
- Hot Air Slasher Dryers
- Cloth Carbonizers
- Tenter Housings
- Overfed Pin Tenter
- Roller Dryers and Curers
- Loop Agers for Print Goods
- Open-Width Bleach Systems for Woven Fabrics
- Multipass Airlay Dryers
- Nylon Setting Equipment
- Con-o-matic Washers
- Continuous Bleach Systems for Tubular Knits
- Equipment for Redmanized* Shrunk-to-fit Fabrics
- Carpet Dryers

*Reg. U.S. Pat. Off.

PROCTOR & SCHWARTZ, INC.
PHILADELPHIA 20, PA.

Personal NOTES ABOUT MEN YOU KNOW

Basil Brewer, publisher of the New Bedford Standard-Times; **Seabury Stanton,** president and treasurer of the Hathaway Manufacturing Co.; and **Andrew W. Macy,** resident manager of the Nashawena Mills division of William Whitman Co., Inc.

William S. Moore, formerly with Huntsville Manufacturing Co., has been appointed superintendent of Hartwell (Ga.) Mills plant No. 2, located at Toccoa, Ga.

Henry E. Hird recently retired as vice-president of Samuel Hird & Sons, Inc., after 53 years of active association with the company.

Ralph Whitaker, president of Fred Whitaker Co., Philadelphia, has been elected to the board of trustees of the Philadelphia Textile Institute. **E. J. Hesketh,** president of Jacob Reed's Sons, Philadelphia, was appointed to the board of governors.

Major General George A. Horkan has retired as the Army's 34th Quartermaster General. **Major General Kester Hastings** is his successor. **Lt. Colonel Jonathan F. Buckley** has been assigned as chief, clothing branch, purchasing division, New York Quartermaster Purchasing Agency.

Clarence Taggart has been elected a vice-president of Riegel Textile

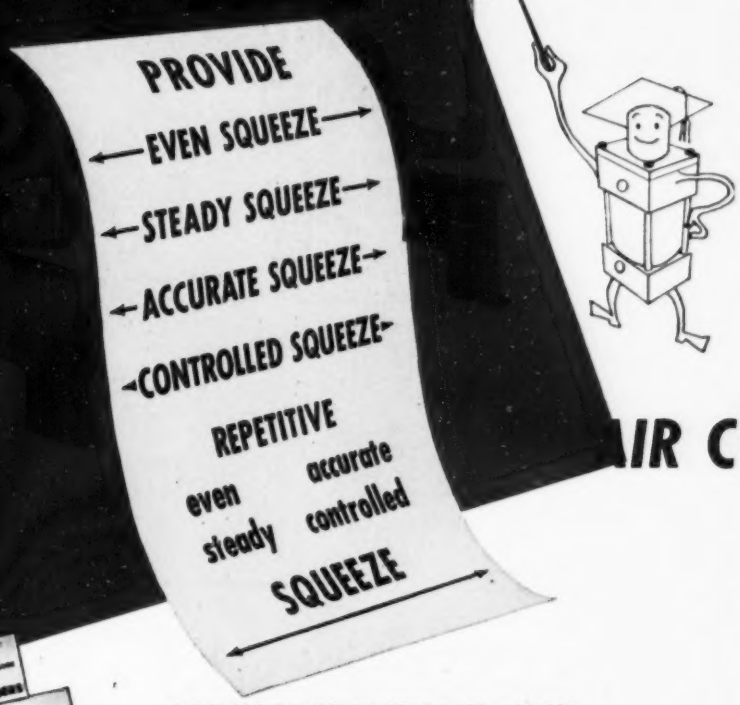
Mr. Taggart

Corp. and will continue as manager of the cotton finished goods department.

Hayward Simpson, assistant superintendent of rayon finishing at the Ware Shoals division, has been promoted to head of the dyeing department at Riegel Textile Corp.'s Trion, Ga., plant.

The Harold De Witt Smith memorial medal for 1954 will be presented to **A. G. Ashcroft,** vice-presi-

EQUALIZE THE SQUEEZE with Miller AIR CYLINDERS



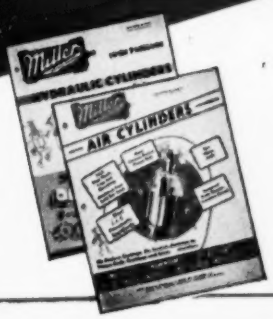
Two Miller Air Cylinders (one at each end of the pressure roll) provide the steady, even "squeeze" so essential for the pressure rolls of Textile machinery.

The variation in friction co-efficiency in these cylinders is practically negligible. Thus, whether the pressure is to be constantly held or reapplied as required, the "twin" cylinders can be depended upon to react simultaneously and in perfect unison to the slightest adjustment. Also, any desired pressure on the rolls can be duplicated and maintained at will.

These top performance qualities are "built-in" features of Miller Standard Air Cylinders proven 98% plus efficient (at 80 psi). The Miller Non-Adjustable Seals assure consistency of performance throughout cylinder life. This consistency is further guaranteed over exceedingly long periods of time by such standard Miller features as solid steel heads and caps, hard chrome plated piston rods, dirt wiper seals and non-corrosive cylinder barrels.

AIR CYLINDERS FOR

- Padders
- Washers
- Steamers
- Rope Squeezers
- Bleaching Equipment
- Dyeing Equipment
- Other Textile Machinery



WRITE FOR CYLINDER BULLETINS A-105 and H-104

Complete Miller cylinder line includes: air cylinders, 1½" to 20" bores, 200 PSI operation; low pressure hydraulic cylinders, 1½" to 6" bores for 500 PSI operation, 8" to 14" bores for 250 PSI; high pressure hydraulic cylinders, 1½" to 12" bores, 2000-3000 PSI operation. All mounting styles available.

SALES AND SERVICE FROM COAST TO COAST

CLEVELAND • YOUNGSTOWN • DAYTON • PITTSBURGH • PHILADELPHIA • BOSTON • HARTFORD • NEW YORK CITY • BUFFALO • ST. PAUL • GRAND RAPIDS • DETROIT • FLINT • FORT WAYNE • SOUTH BEND • INDIANAPOLIS • MILWAUKEE • LOUISVILLE • KANSAS CITY • SEATTLE • LOS ANGELES • SAN FRANCISCO • BALTIMORE • DENVER • ST. LOUIS • MOLINE • CHICAGO • HOUSTON • TORONTO, CANADA and OTHER AREAS

MILLER FLUID POWER CO.
(Formerly MILLER MOTOR COMPANY)

2042 N. Hawthorne Ave., Melrose Park, Ill.

AIR & HYDRAULIC CYLINDERS • BOOSTERS • ACCUMULATORS
COUNTERBALANCE CYLINDERS

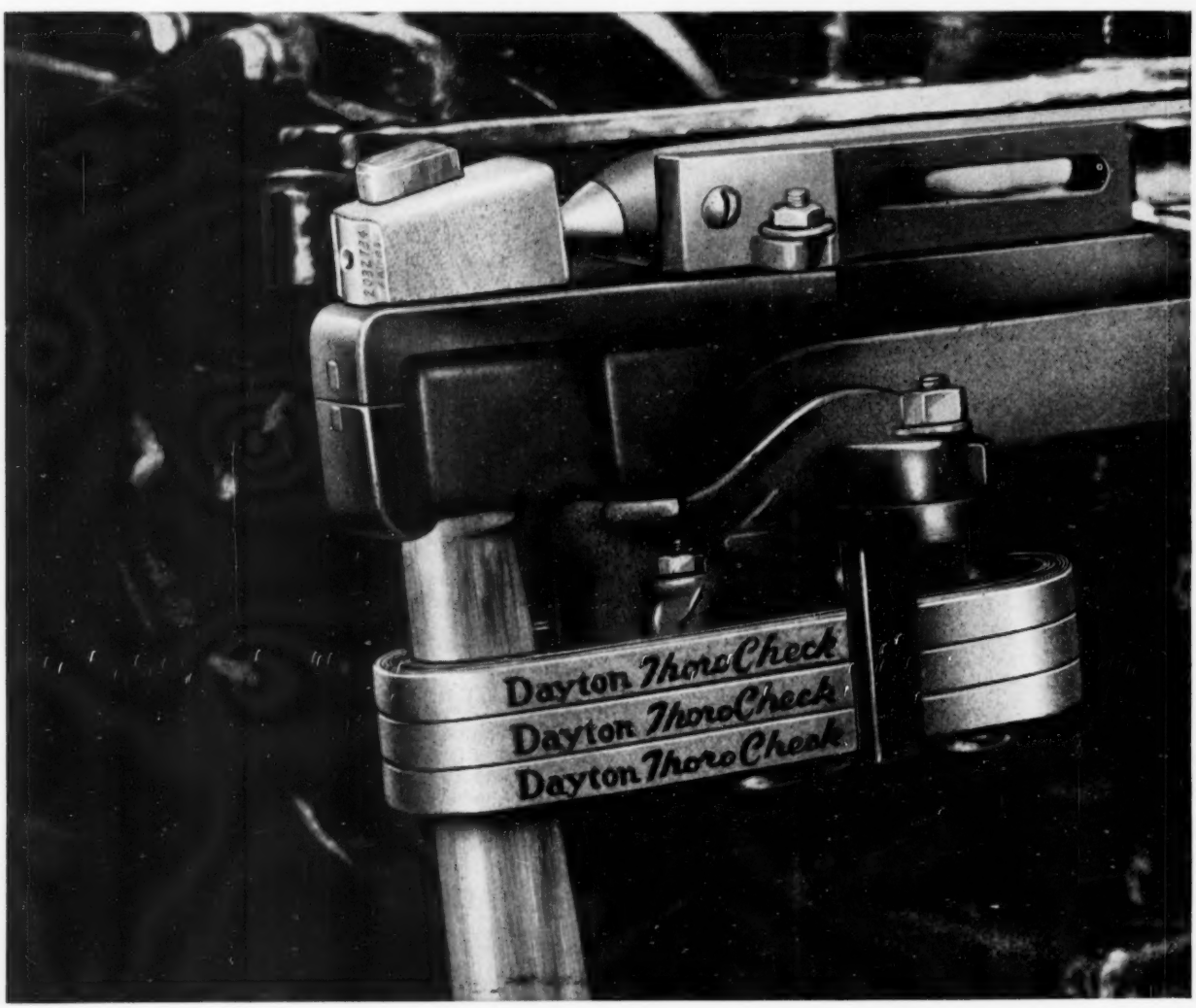
Mills Save 25%

DAYTON ThoroCheck

Actual use proves economy of Dayton ThoroChecks. Reduce picking motion costs by equipping your frames with Dayton ThoroChecks that have proved themselves in actual operation. Mill superintendents report a 25% to 50% reduction in check strap cost as well as healthy savings in time, labor and maintenance with these amazing, longer-lasting synthetic ThoroChecks.

One mill reports installing Dayton ThoroChecks on 40 looms running 182 picks per minute. No adjustment has been necessary and inspection after 14 months of continuous service shows no signs of wear. No telling *how much* the saving will eventually be when new Dayton ThoroChecks are finally installed.

You can get these worthwhile benefits for *your* weaving



to 50% with...

Endless Check Straps

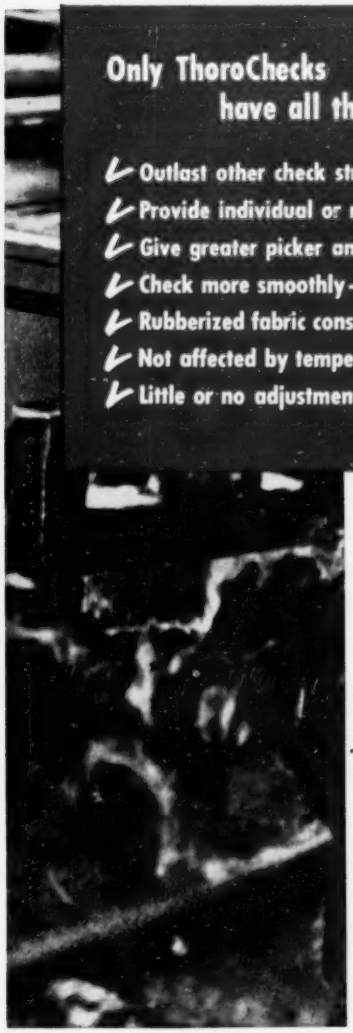
room operation, just as other mills are doing, by changing to Dayton ThoroCheck Endless Check Straps throughout.

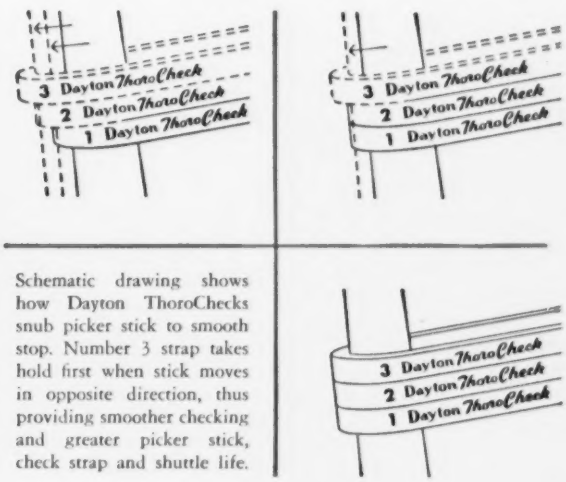
There's an important safety factor, too, in Dayton ThoroChecks. For, when breakage finally does take place after lengthy service, usually only one check strap of the set will be affected . . . the remaining two will protect your equipment until the needed replacement has been accomplished.

Smoother checking by means of a snubbing action protects the stick and, in addition, because impact of the picker stick is displaced over *all three* straps, you get longer strap life under the severest pounding. No doubt about it, you'll improve your checking operation and reduce your cost with Dayton ThoroChecks. Try a test today. Just fill out and mail the coupon for complete details without delay.

Only ThoroChecks have all these advantages:

- Outlast other check straps 25% to 50%
- Provide individual or multiple replacement
- Give greater picker and shuttle life
- Check more smoothly—protect picker stick
- Rubberized fabric construction—no elongation
- Not affected by temperature or humidity
- Little or no adjustment needed





Schematic drawing shows how Dayton ThoroChecks snub picker stick to smooth stop. Number 3 strap takes hold first when stick moves in opposite direction, thus providing smoother checking and greater picker stick, check strap and shuttle life.

Dayton Rubber

Since 1905

Textile Products for Better Spinning & Weaving

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Dayton Rubber Co., Textile Division **Woodside Bldg., Greenville, S. C.**

Dayton Rubber Co., Textile Division, Dept. 363, Woodside Bldg., Greenville, S. C.
Send me complete information on Dayton ThoroCheck Endless Check Straps

Name _____

Name of Mill _____

Address _____

City _____ *Zone* _____ *State* _____

Personal NOTES ABOUT MEN YOU KNOW

dent and director of research and development, Alexander Smith, Inc., during the spring meeting of Committee D-13 of the American Society for Testing Materials.

Richard G. Robertson, formerly in the North Andover, Mass., mills, is now assistant superintendent of the Franklin, N. H., Mills of M. T. Stevens and Sons Co. He succeeds Ray Spofford, resigned.

R. Fred Long, previously with Groves Thread Co., Inc., is now superintendent at Tolar, Hart & Holt Mills, Inc., Fayetteville, N. C. He was succeeded at Groves by **Max Redding,** previously with Burlington Mills Corp., Gastonia, N. C.

Textron, Inc., has announced the appointment of **James S. Ballenger** as plant manager of Textron Southern's Peerless plant. He was formerly manufacturing technician of the filament plants.

General Mark W. Clark, now retired from the Army, has been elected a director of Vision Hosiery Mills, Belmont, N. C.

Edward S. Rudnick, director of research at Wamsutta Mills, New Bedford, Mass., has been elected an Associate of the British Textile Institute.

Courtney Whitin, formerly with Bigelow-Sanford Carpet Co., has rejoined Paul Whitin Manufacturing Co., Northbridge, Mass., as assistant treasurer and controller.

W. Bryan Moore, vice-president, has been promoted to president of Wade Manufacturing Co., Wadesboro, N. C. He succeeds L. D. Rivers, retired.

At the United States Rubber Company's Hogansville, Ga., operation, **E. Clint Wingate,** section man in the Stark Mill spinning department, was recently promoted to shift supervisor in the Reid Mill carding and spinning department.

Max F. Schmidt has succeeded F. Eugene Ackerman as president of The Wool Bureau, Inc. At present with Foote, Cone & Belding, Mr. Schmidt was for a number of years in charge of sales promotion, merchandising, and publicity for Collins & Aikman Corp.

Obituaries

William Amory, 84, board chairman of Pepperell Manufacturing Co.

Bradley S. Askew, 56, textile engineer with Bemis Bros. Bag. Co.

H. R. Backhouse, 61, chairman and managing director of Mellor Bromley & Co., Ltd.

Bernard Joseph Kane, director of purchases at Fulton Bag and Cotton Mills.

John A. Kane, 92, president and treasurer of Fashion Screen Printing Co.

Clarence F. Pate, overseer of the twisting and winding departments, Valway plant, Callaway Mills Co.

William H. Regnery, 76, president of Joanna Western Mills.

Howard Seiger, 76, president of Merit Underwear Co., Shoemakersville, Pa.

F. E. Struve, 64, executive vice-president and general manager of Apex Hosiery Co.

NON-FLUID OIL
TRADE MARK REGISTERED

NON-FLUID OIL
BENEFITS 2 WAYS!

In your spinning operation, you need a lubricant that will positively stay in roll necks and off aprons and roll coverings. The leaders—7 out of 10 mills—use NON-FLUID OIL . . . a modern lubricant for top and bottom rolls and saddles that pays for itself many times over because NON-FLUID OIL lasts 3 to 5 times longer than ordinary oils.

Insist upon NON-FLUID OIL and benefit 2 ways: (1.) better, trouble-free lubrication at less cost, and (2.) greater production of clean, even yarn.

You will want to know more about NON-FLUID OIL. Send now for instructive Bulletin T13-T1 and a free testing sample of NON-FLUID OIL.

Visit us at Booths 41 & 42—American Textile Machinery Exhibition, Atlantic City, N. J.—April 21-30, 1954

NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVE., NEW YORK 17, N. Y.
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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.

Tri-Raising Machines

ARE SUPERIOR TO STANDARD MACHINES BECAUSE OF:

- INCREASE IN PRODUCTION UP TO THREE TIMES OF NORMAL OUTPUT
- STEPLESSLY VARIABLE CLOTH SPEED UP TO 40 YARDS PER MINUTE
- STEPLESSLY VARIABLE NAPPING EFFECT
- SUPERIOR NAPPING EFFECT
- FEWER CLOTH RUNS NECESSARY
- ELECTRO-MAGNETIC INSTANT BRAKE

FRANZ MULLER

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277 North Ave., New Rochelle, N. Y.

STANDARDIZE!

ECONOMIZE!

with the bushing that's interchangeable

TAPER-LOCK

A PATENTED PRODUCT OF DODGE

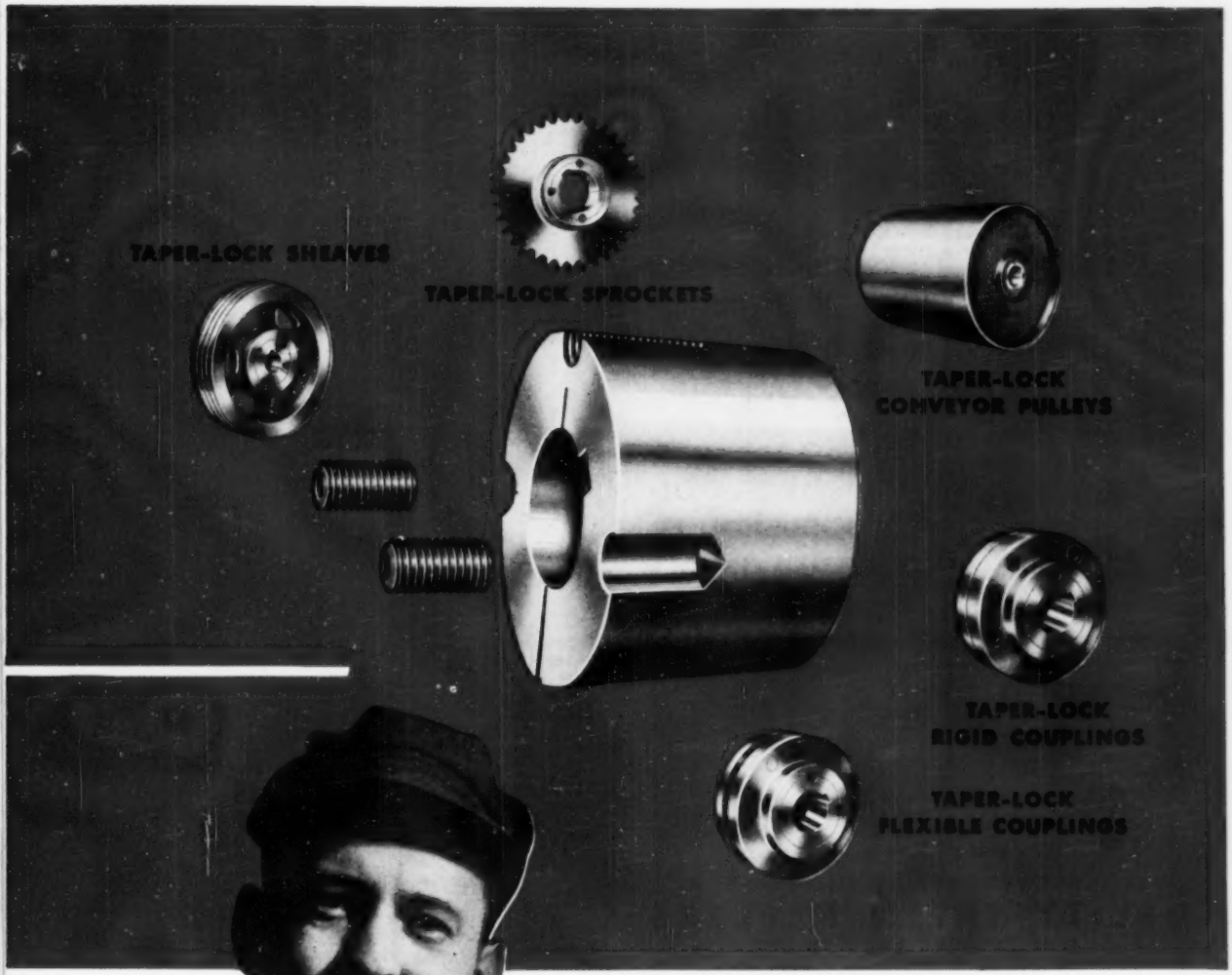
Now mount 'em all—your sheaves, sprockets, couplings, conveyor pulleys —with Taper-Lock bushings. You'll save time, save money, and keep production rolling by standardizing on these interchangeable bushings.

Taper-Lock, a patented product of Dodge, provides the simplest, surest means of mounting wheels on shafts. Dodge Taper-Lock products slip onto the shaft easily, quickly—hold with the firmness of a shrunk-on fit. They come off easily—no hammer, no crowbar, no shock to bearings or machinery.

Taper-Lock bushings fit in every one of the Dodge products pictured above. You can shift from a sprocket to a sheave, for instance, and use the same bushing. And Taper-Lock bushings are available in a range of sizes which makes changing from one size shaft to another equally easy and quick.

With a few Taper-Lock bushings you can make quicker changes and cut down-time on production machines. Get the facts now.

DODGE MANUFACTURING CORPORATION, 3500 UNION STREET, MISHAWAKA, INDIANA



THERE'S ONLY ONE TAPER-LOCK, THE BUSHING THAT MOUNTS FLUSH!

DODGE

of Mishawaka, Ind.

CALL THE TRANSMISSIONEER, your local Dodge Distributor, for valuable assistance on new, cost-saving methods. Look for his name under "Power Transmission Machinery" in your classified phone book, or write us.

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PRODUKTION OG PROFIT
PRODUCTIE EN WINST
الانتاج والربح
PRODUCTIE EN WINST
יצור ורוחים
PRODUKSIE EN WINS
PRODUÇÃO E LUCRO
ထွက်ကုန်နှင့်အမြတ်
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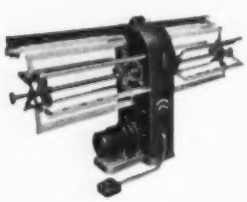
PRODUCTION ET PROFIT
PRODUKTION OCH PROFIT
生產與利益



FIDELITY SKEIN REELERS SPELL

PRODUCTION AND PROFIT

in 15 different languages

'Round the globe—from New York to Iceland to South Africa to China—users have found that Fidelity Skein Reelers mean increased production and profit. Manufacturers throughout the U. S. and in 25 foreign countries have installed Fidelities, because they are easier to use and more profitable to operate.

In any language, Fidelity Skein Reelers prove that they are their own best salesmen. Why not let them prove their ability to you, too? Write today for illustrated brochure, "The Fidelity Skein Reeler." (SR104)

If you are in the Philadelphia area, visit the new showroom at our plant.

Designers and Builders of Intricate, Automatic Precision Machines

FIDELITY MACHINE COMPANY, INC.

SINCE 1911

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What the TEXTILE MILLS are doing

Certified as "excellently managed" by the American Institute of Management, New York, were eight companies in the textile and allied fields —**Anderson, Clayton & Co.; American Viscose Corp.; Cannon Mills Co.; Celanese Corp. of America; Marshall Field & Co.; Industrial Rayon Corp.; Pepperell Manufacturing Co.;** and **West Point Manufacturing Co.**

Adamo Co., cotton carpeting, has moved to 5700 South San Pedro St., Los Angeles, Calif., where additional machinery was installed to provide for a capacity of about 2 million yards of carpeting yearly. The firm has also begun the manufacture of cut-pile carpeting of Tufton (viscose fiber) and nylon.

A one-story addition has been constructed at the plant of **Allendale Co.,** Centredale, R. I.

The **American Rayon Institute** now has offices at the Empire State Building, New York, N. Y., but is expected to move to larger quarters soon.

Sevier, N. C., is now headquarters for the purchasing agent, J. H. Leverette, and his assistant, James Scott, for the southern mills of **American Thread Co.**

Textile Institute, 1171 Purchase St., New Bedford, Mass., a state-owned institution, has under construction an addition to be used for laboratories, lecture rooms, and classrooms.

Gabriel M. Garabedian is president and treasurer of the recently organized **Thorndike Mills, Inc.,** Palmer, Mass. Rugs and carpets will be manufactured.

Aragon (Ga.) Mills, now owned by United Merchants & Manufacturers, Inc., are planning an expansion program, including installation of additional equipment.

The recently chartered **Artex Manufacturing Co., Inc.,** Asheville, N. C., is headed by Edward H. Field and Karl H. Straus, principal incorporators.

Bemis Bro. Bag Co., Talladega, Ala., is currently distributing to all employees a newly published 23-page booklet containing pertinent information about the company. Included are

YARN DYED FABRICS...

the Royalty of Textiles

Yarn dyed fabrics like that shown here have always been the royalty of textiles. Formerly for the wealthy alone, they are now available to all—in a triumph of low-cost modern production.

As yarn merchants, handling many brands and qualities, Franklin Process can impartially supply you with the best colored yarns for your purpose. For prices and deliveries, get in touch with the nearest of our five strategically located plants.

Franklin Process

COTTON YARN MERCHANTS AND LARGEST PACKAGE DYERS IN THE WORLD

New York
Representatives
40 Worth Street

Providence
Philadelphia
Greenville
Chattanooga
Fingerville, S. C.

18th Century French Brocade, about 1740.
Museum of Art, R. I. School of Design.

America's best-dressed Best Sellers use

a-pac-o

Action Packages

Money *moves* when customers come within range of your product dressed to go places—in a sales-compelling **a-pac-o** Action Package. Whether your problem is one of construction, use or price, you'll find the right package at **a-pac-o,** creators of some of America's best-dressed *best sellers.*

ATLANTA PAPER COMPANY
Atlanta 2, Georgia

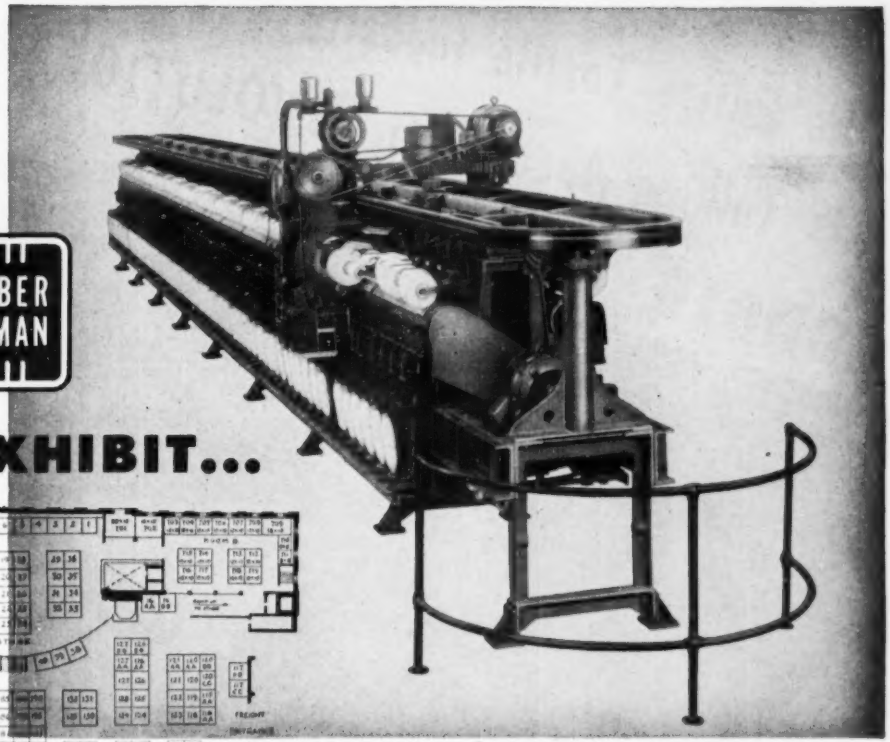
Natural package-partners!

Your **a-pac-o** Display Folding Cartons arrive factory-fresh when you ship in handsome, rugged **a-pac-o** Corrugated Shipping Cases. *Write or phone for samples and prices.*

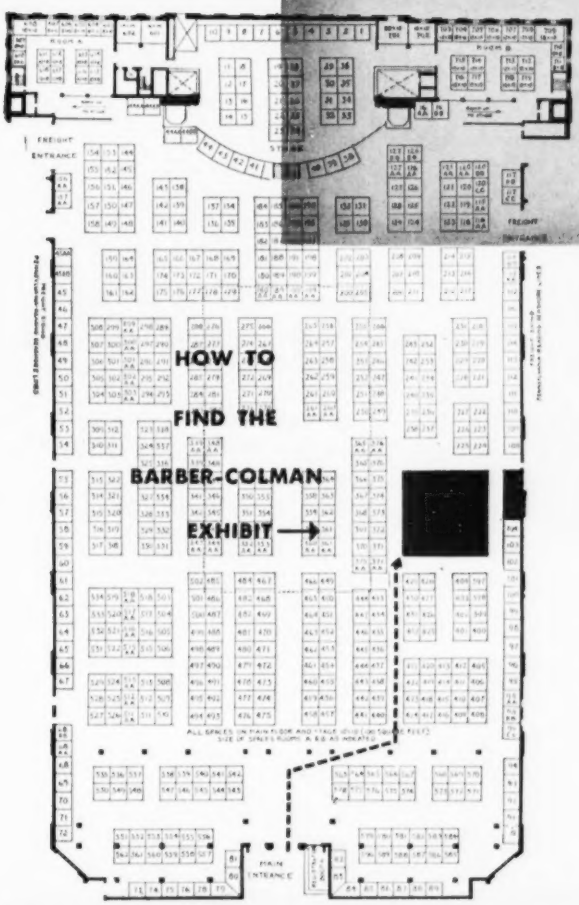
ATHENS, GA. • CHARLOTTE, N. C. • CHICAGO, ILL. • COLUMBUS, GA. • GREENVILLE, S. C. • KNOXVILLE, TENN. • MACON, GA. • NEW YORK, N. Y.

TEXTILE MACHINERY EXHIBITION
ATLANTIC CITY
APRIL 26-30 1954
AMERICAN ASSOCIATION

BARBER COLMAN



WILL EXHIBIT...



THIS NEW
LARGE-PACKAGE
AUTOMATIC

SPOOLER

This new Type "D" machine, specially designed to extend the advantages of large-bobbin spinning, will produce packages weighing up to 6 pounds. It is an improved and modernized version of the familiar Type "C" Spooler. *See it in operation . . .*

AT THE **1954** AMERICAN
TEXTILE MACHINERY EXHIBITION
ATLANTIC CITY
APRIL 26-30, 1954

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

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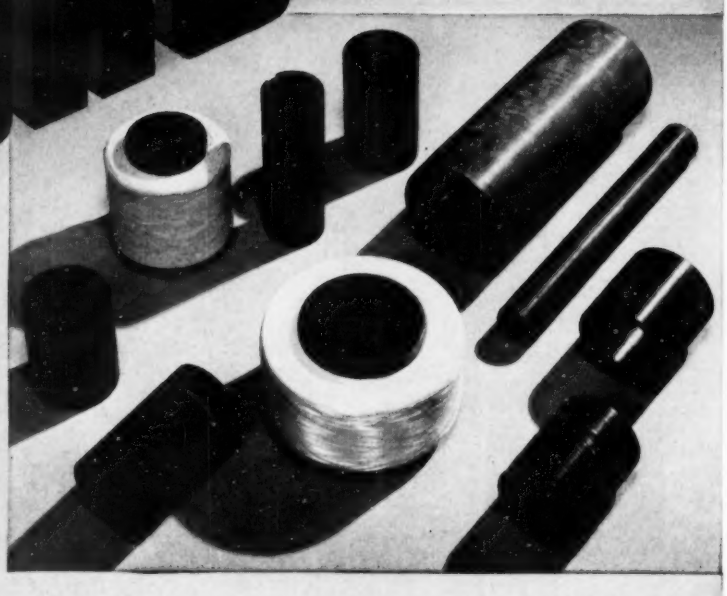
The Entire Textile Industry is Talking About The REVOLUTIONARY

sonoco DUROWELD PROCESS



Can be supplied with various surfaces — smooth, rough, flocked, scored, knurled. Ends can be colored for identification.

- DACRON TUBES
- BOBBINS
- TWISTER TUBES
- SPOOLER SLEEVES
- CHEESE CORES
- NYLON SIZING CORES
- LAP ROLLS
- PERFORATED DUROWELD TUBES
- and many other possible uses!

And there's good reason, too! DUROWELD by SONOCO, at last gives the industry a tough low cost, reusable carrier — capable of withstanding the high speed of today's modern equipment.

DUROWELD means we can now produce radically new and different carriers with micrometer tolerance and true balance.

Are you having carrier problems? DUROWELD may be the answer! Our sales and engineering departments would be happy to discuss the matter with you.

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION ATLANTIC CITY APRIL 26 TO JUNE 1 1954

See DUROWELD Products on display in our Booth - No. 71-72.

SONOCO PRODUCTS COMPANY

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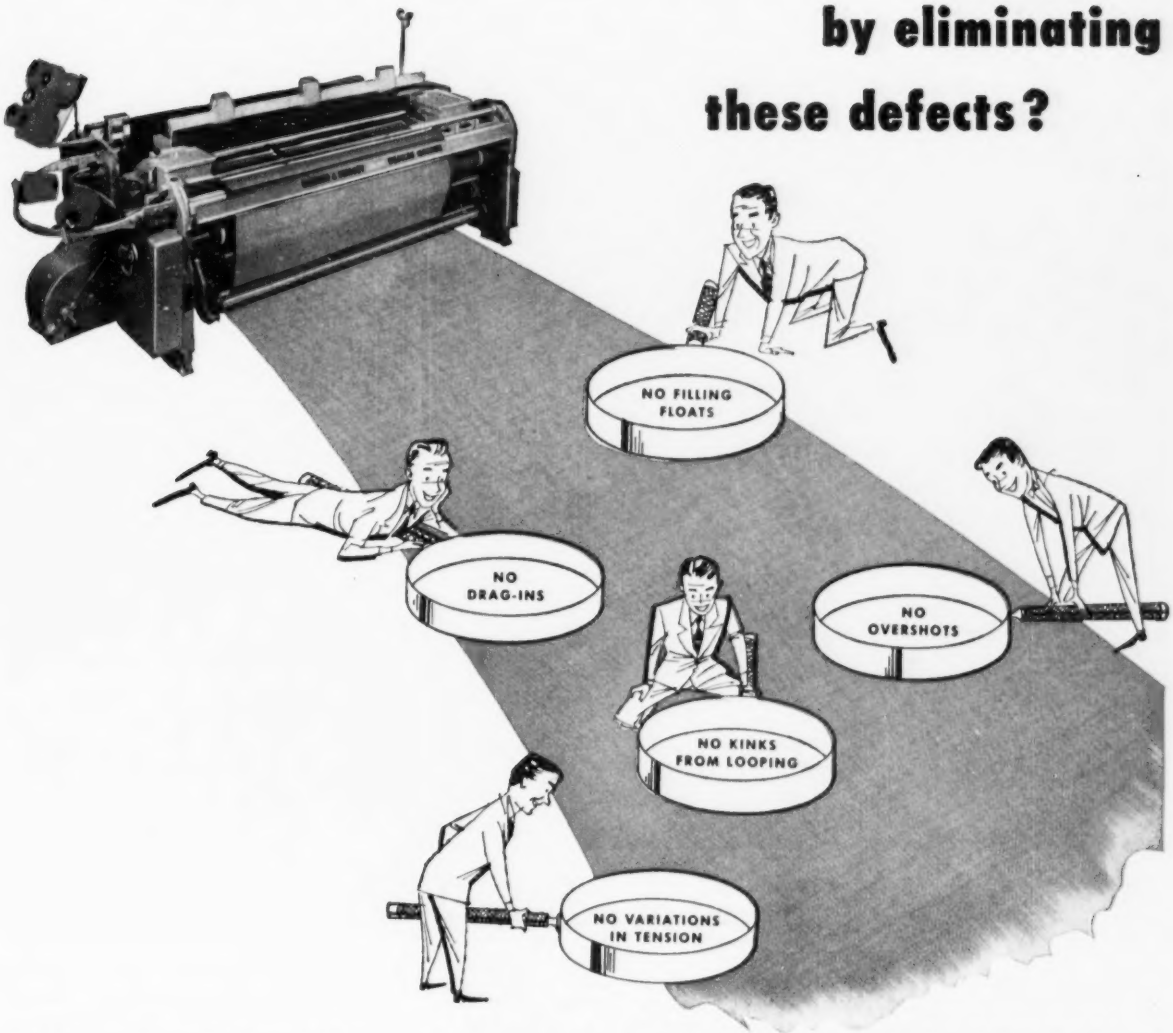
DEPENDABLE SOURCE OF SUPPLY

sonoco SERVES THE WORLD PAPER CARRIERS REG. U.S. PAT. OFF.

How many "quality dollars" can you save by eliminating these defects?



WITH a Warner & Swasey-Sulzer Weaving Machine you can do away with *all* these costly defects, because this machine eliminates even the *possibility* that they may occur. It weaves more yards with fewer defects—requires less of the weaver's attention—automatically cuts mending costs and seconds.

It does away with all the problems of the conventional bobbin-shuttle combination. Small steel shuttles draw directly from a large filling package. There's no bobbin changing—no chance for defects like drag-ins. Its "pick-and-cut" action also eliminates kinks from looping.

Automatic tension control on the pick eliminates the tendency for variations in tension that often show up in fabrics. This control also minimizes the possibility of filling kinks from "live" yarn.

It has a positive cam-driven harness action—made of steel—that eliminates overshots from broken cords, harness straps or springs.

Take-up and let-off are also automatically controlled, giving a constant tension from beginning to end of the warp, providing a more even cloth.

Shuttles are guided through the warp—there's no possibility of filling floats, no danger of a shuttle flying out. And made of steel, these shuttles can't split or splinter and cause a bad warp breakout.

Here's a machine that builds profits with *greater production*, because it weaves faster—up to 240 ppm. And you'll realize additional profits because it's *quality production*—with far lower mending costs, far fewer seconds.

SALES OFFICES

Main Office and Factory: 5701 Carnegie Ave., Cleveland 3, Ohio
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Candler Building, Atlanta, Ga. 1820 Browning Ave., Charlotte, N. C.

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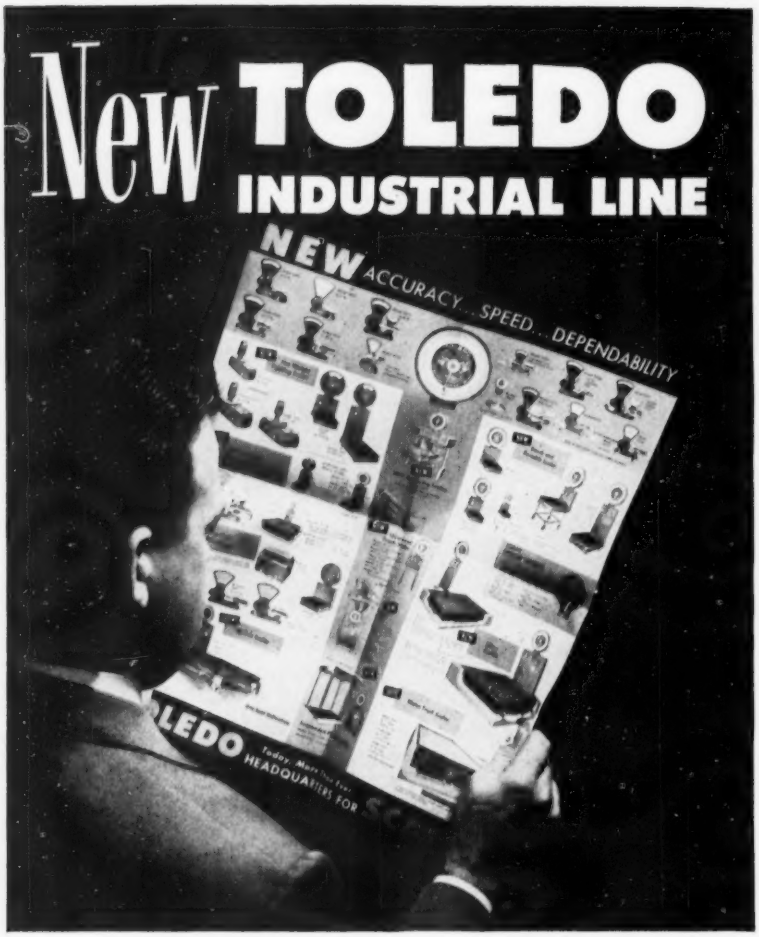
New TOLEDO INDUSTRIAL LINE



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HEADQUARTERS FOR SCALES

What the TEXTILE MILLS are doing

a brief history, description of health and insurance benefits, and the various services provided for the employees.

The dyeing division of **Bailey Dye Works, Inc.,** Philadelphia, Pa., has been sold to Dyecraft Corp., and Erie Hosiery Finishers, Inc., has acquired the finishing division.

Sydney B. Feingold, 5 View St., Worcester, Mass., is president of the newly chartered **Bedford Textile Corp.,** Loomis St., Bedford.

Berkshire Fine Spinning Associates, Inc., Providence, R. I., has completed a modernization program at the former Lincoln Bleachery and Dye Works which it recently acquired.

Three new tufted cotton broadloom lines are now being produced by **Bigelow-Sanford Carpet Co.,** in addition to its regular wool output.

A new company to manufacture synthetic fabrics for upholstery and other service has been organized by **Max E. Bornstein,** Morganton, N. C., and associates.

The **Broad Brook (Conn.) Co.** has sold its machinery and equipment at public auction. The real estate was previously disposed of at a private sale.

Buckland Knitwear, Inc., recently chartered, will manufacture outerwear. Marjorie Knapp, 1407 Broadway, New York, N. Y., is representative.

Burlington Mills Corp. has purchased the **Interstate Hosiery Mills,** Lansdale, Pa. It is reported that Interstate's operations will continue as before. Burlington has established a new worsted division, with a special spinning mill now in operation.

At the annual Christmas dinner given employees and families of **Brookshire Knitting Mills, Inc.,** Manchester, N. H., a $500 defense bond was awarded Martin J. Witzel for his 20 years of service with the company. Employees of ten years and over were also honored.

A grant of $35,000 has been announced by **Callaway Mills Co.** to help make possible construction of an auditorium-gymnasium for the Manchester, Ga., negro high school. An-

Babying Your Products is the Special Talent of Gaylord Boxes

Gaylord Boxes cradle your product in *safety* from packing line to the end of the trip.

This positive protection is a natural result of Gaylord's specialized approach to container engineering. Successful experience and tireless ingenuity combine to produce quality boxes that are exactly suited to your particular packing needs.

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METALLIC
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CARD
NYLON, WOOL AND
CLOTHING
ALL STAPLE FIBRES
100 YEARS EXPERIENCE
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What the TEXTILE MILLS are doing

other grant is for construction of a home for the American Legion Post No. 88. The firm has also announced the consolidation of Valway Plant and Dye Plant, in HDV division, into one plant known as Valway plant. S. P. Rice was made superintendent of the new plant, with John M. Blackman, former superintendent of the Dye Plant, now assistant superintendent.

A controlling block of stock of **Hoover Hosiery Co.,** Concord, N. C., has been purchased by **Cannon Foundation, Inc.,** an interest of Cannon Mills Co. It was announced that the hosiery mill would be operated as heretofore.

Chatham Mfg. Co., Elkin, N. C., has become a sales distributor and sole supplier of blanket material for all General Electric automatic blankets. At the same time the firm discontinued its own line of blankets.

Childrey Hosiery Mills, Inc., Haw River, N. C., has been chartered to take over and succeed the company of the same name. Half-hose will be manufactured.

Clare Bedding Co., Clarkston, Mich., has taken over property at Hermansville, Mich., and is establishing a new mill there.

Colorite Textile Print Works, Inc., Bronx, recently established, will operate a dye and print works. Bertha Noville, 2477 Aqueduct Ave., Bronx, N. Y., is company representative.

Columbia Mills, Inc., Syracuse, N. Y., has purchased **Blackburn Products, Inc.,** 24 Ave. B., Newark, N. J., artificial leather specialties and plastic-coated products. It will be operated as a separate division of Columbia, with I. R. Blackburn as head.

Installation of 33 new spinning frames (9000 spindles), 8 new twisters, and accessory equipment, are being installed at the No. 1 spinning room of **Corriher Mills Co.,** Landis, N. C.

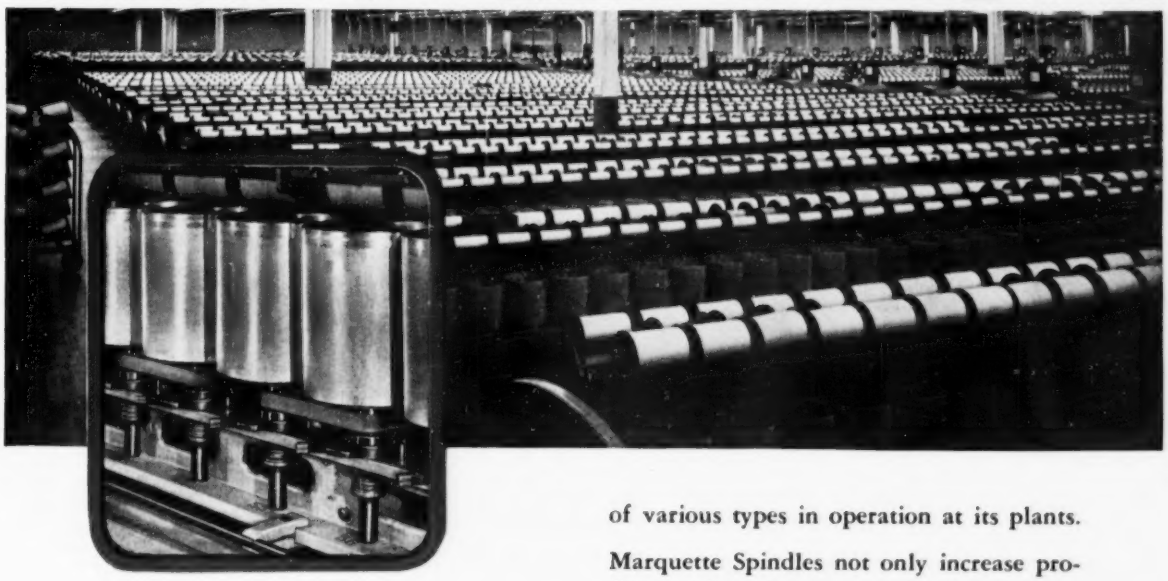
Cone Mills Corp. has under construction a one-story addition to the Edna Mill, Reidsville, N. C., for expansion in the carding division.

Cranston Print Works Co. has leased an entire floor in a new building at 261 Madison Ave., New York

Marquette
ROLLER BEARING SPINDLES

WITH
Full-Floating Footstep Bearing

For Cotton, Synthetics, Wool, Worsted



In 1944 Industrial Rayon Corp. ran a series of tests of Marquette Twister Spindles. As a result of the tests, this company now has more than 40,000 Marquette Twister Spindles of various types in operation at its plants.

Marquette Spindles not only increase production, but also cut costs by their savings in power, tapes and lubricant.

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What the TEXTILE MILLS are doing

City, and will move its offices to that location.

A new multi-color metallic yarn, said to be non-tarnishing, washable, and dry cleanable, is under production at the Lurex division of **Dobeckmun Co.**, Cleveland, Ohio.

Dorian Lace Mill, Inc., recently chartered, will manufacture machine laces, braids, etc. Frederick J. Weston, 875 Hope St., Bristol, R. I., is principal incorporator and representative.

Dover Mill Co. plans construction of a new throwing mill near the Ora Mill, Shelby N. C., to be used for production of nylon and other synthetic yarns.

Dublin Mills is the new name for Dublin (Ga.) Woolen Mills.

A one-story addition, totaling nearly 35,000 sq ft floor space, has been completed at **E-Z Mills, Inc.,** Cartersville, Ga. It will be used for warehouse service.

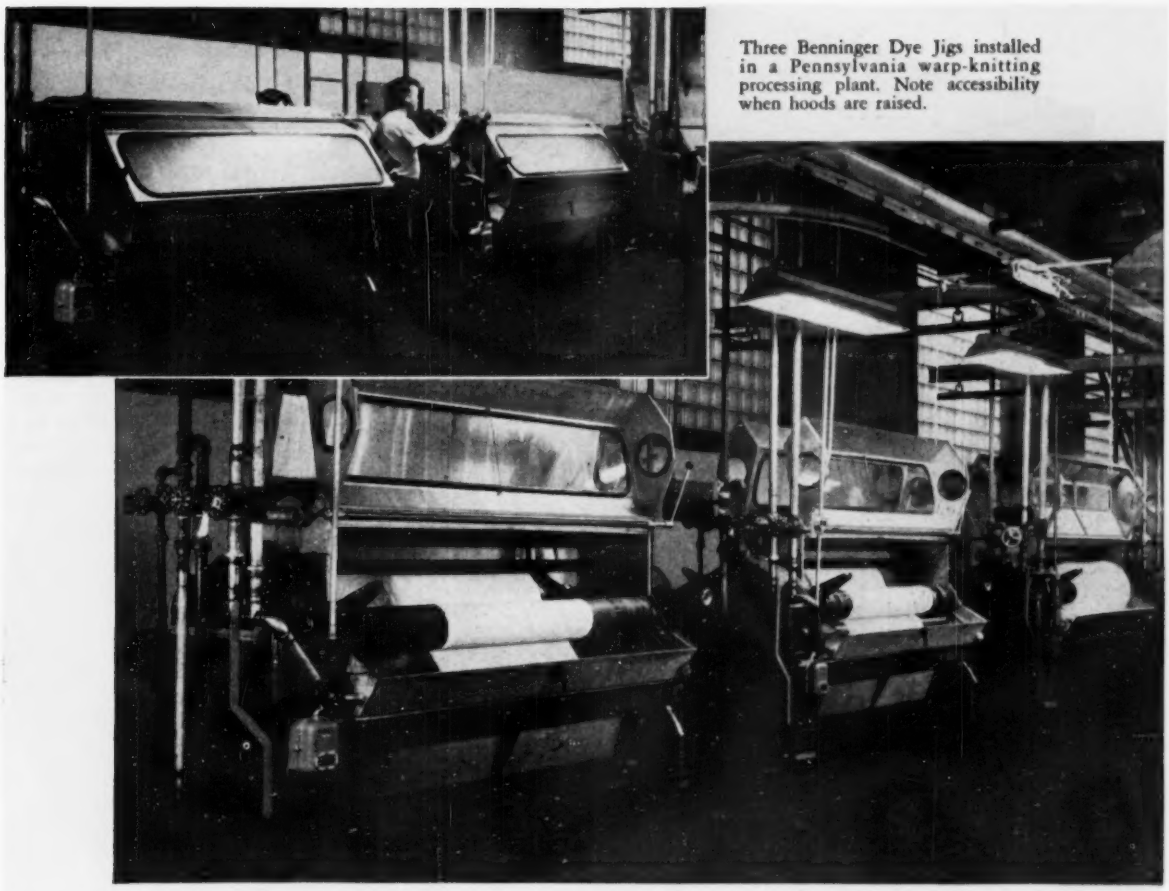
Equinox Mill, Anderson, S. C., has made available to its employees, for purchase, the houses in the Equinox village. No down payment is required, the purchase price to be retired in ten years through weekly payments. 164 houses are involved, 29 of which are two-family houses.

276 employees of the Durham, N. C., plants of **Erwin Mills, Inc.,** who have been with the firm 25 years or more were recently honored at a banquet. Similar dinners have been held elsewhere in the Erwin chain; a total of 701 employees at Erwin plants are members of the 25-Year Club. A new water distribution system for the town of Stonewall, Miss., now under construction, will provide water for some 200 families employed at Erwin Plant #8.

Machinery and other assets of **Ford Hosiery Mills, Inc.,** Hickory, N. C., have been sold at public auction. The mill was closed last April.

Glasgo Ltd., 250 West Cambria St., Philadelphia, Pa., has added a line of Orlon polo shirts for men to its production.

Frieda Manufacturing Co., Bessemer City, N. C., recently purchased by Carlton Yarns Mills, Inc., will be used as an experimental unit, according to Ben R. Rudisill, president of



Three Benninger Dye Jigs installed in a Pennsylvania warp-knitting processing plant. Note accessibility when hoods are raised.

These Benninger Dye Jigs Save Production Time, Give Uniform Dyeing

The Benninger Dye Jig does not depend on manual control for precise, uniform dyeing. Adjustable controls keep cloth under slight but constant tension and keep cloth-running speed practically constant. An oscillating balance expanding device insures creaseless runs on any kind of cloth. The enclosed hood keeps temperature of cloth uniform from center-to-selvedge and end-to-end; prevents oxidation of the cloth selvedge, and eliminates fogging of the dyehouse.

As for savings in production time . . .

An automatic reversing and stopping device with a self-acting passage counter saves the operator from having to walk over to the jig and throw a clutch every time there's a reversal of cloth . . . A squeezing device allows extraction of fabric before removing it from the jig . . . One man can operate *six* Benninger machines . . . and the 40" batch dye jig can handle 1200 yards of cloth at a time — saving labor and dyestuffs as well as hours. You can use this unit also for smaller lots — and with a Benninger there's no problem to match shades.

Standard unit widths 51¼", 63", 75". FFM Type dyes rolls up to 39½" diameter and its most useful width is 98½". Service and parts from stock are readily available. For full details write to —

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Machines for Bleaching, Boiling-Out, Dyeing, Mercerizing, Finishing & Embossing : : Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

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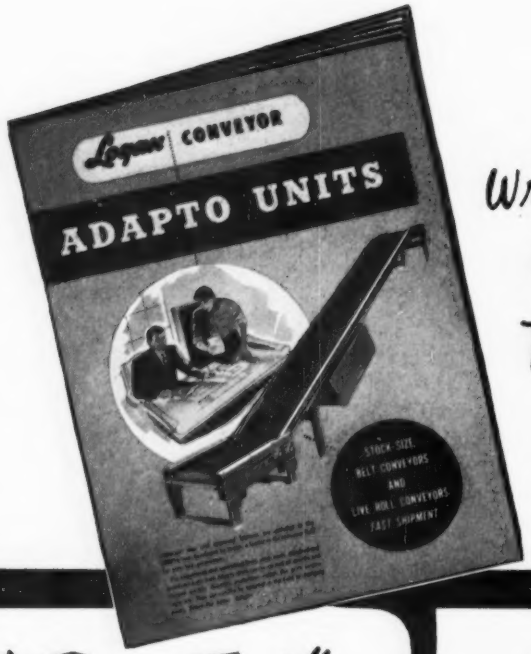
TEXTILE MACHINERY EXHIBITION
AMERICAN ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954



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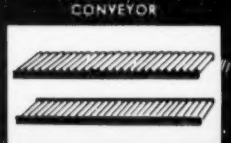
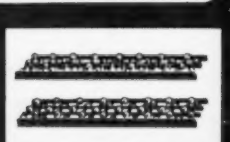

ROLLER CONVEYOR STRAIGHT SECTIONS

WHEEL CONVEYOR CURVED SECTIONS


WHEEL CONVEYOR STRAIGHT SECTIONS

ROLLER CONVEYOR CURVED SECTIONS

What the TEXTILE MILLS are doing

Carlton. The plant has been completely overhauled. 100% synthetic yarns, 100% cotton yarns, and blends of Dacron will be spun.

A three-story addition to the plant of **Fulton Bag & Cotton Mills,** Atlanta, Ga., has been completed and is being used as a finishing mill. Four scholarships to Kansas State College were recently awarded by the firm. These were established in 1949 to attract young men to the milling industry and to assist them in milling technology education.

Plant A of **Glen Woolen Mills,** Norwich, Conn., has been disposed of and operations are being consolidated at Plant B.

Textron Incorporated has acquired all the stock of the Dalmo Victor Co., San Carlos, Cal., producer of airborne radar antenna. It will be operated as a wholly-owned subsidiary of Textron.

Highstown (N. J.) Rug Co. has a new mill under construction which will provide 60,000 sq ft floor space. The first section is expected to be ready by August, for production of new style round wire and twist weave velvet rugs.

Thomaston (Ga.) Mills, bleachery division, have plans for an addition which will provide 4500 sq ft additional floor space.

Philip Olan, 305 Broadway, New York, N. Y., is attorney and representative for the **Hy-Dora Knitwear Corp.,** recently chartered to manufacture knit outerwear.

A new process of press-dyeing patterns on socks has been announced by **Interwoven Stocking Co.,** New Brunswick, N. J. The application eliminates patterning restrictions imposed by seamless knitting machines.

Jackson Mills, Inc., Wellford, S. C., has a modernization and improvement program under way at its No. 2 mill.

Jantzen Knitting Mills, Portland, Ore., has changed their name to **Jantzen, Inc.**

The Vass, N. C., mill of **Textron Southern, Inc.,** has been purchased by W. R. and W. F. Jones of **Jones Manufacturing Co.,** Humboldt, Tenn.

HUNTER *equipment safeguards quality*

at THE UNITED PIECE DYE WORKS

The United Piece Dye Works . . . one of the foremost dyers, finishers and printers of synthetic fabrics . . . preserves its fine reputation by maintaining continuous quality control through the use of efficient, dependable equipment.

It is only natural, therefore, that in quality-conscious mills Hunter "plus production" equipment is preferred for the superior finishing of ***synthetics, blends, cottons*** and ***woolens.***

At The United Piece Dye Works and other leading mills throughout the world Hunter Dyeing Machines are used to achieve consistent quality production. UPDW's Charleston plant is equipped *exclusively* with Hunter Model A Dye Becks . . . all with the new, patented NO/LAP Reels. Complete, detailed information in BULLETIN PDM.

plus production

- sufficient operation of modern equipment
- less down time of equipment
- quick, easy repair . . . rapid parts delivery

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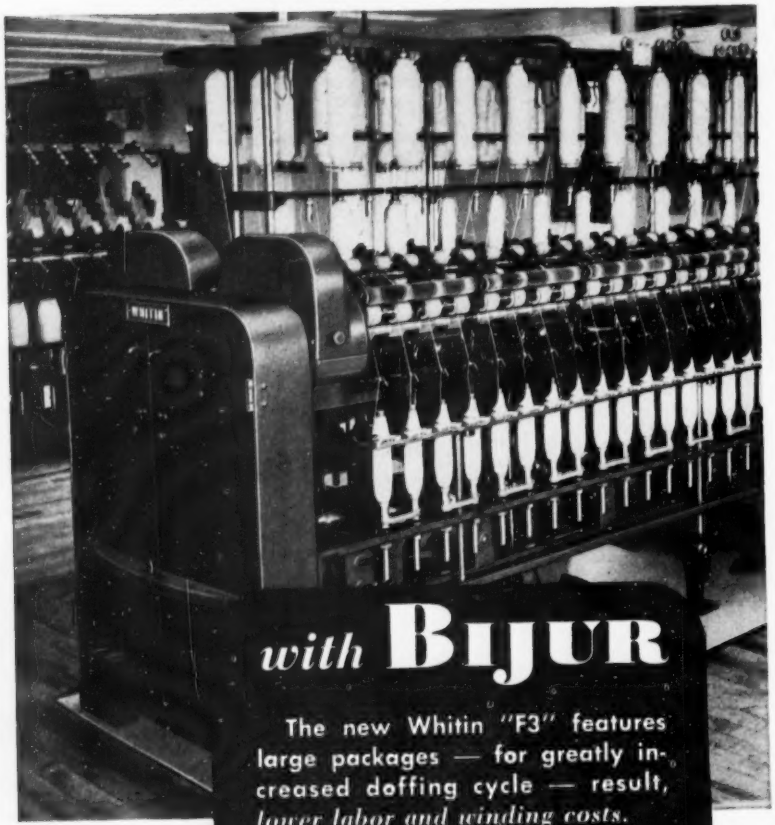
NORTH ADAMS, MASSACHUSETTS FOUNDED 1847

LOW COST MAINTENANCE



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The new Whitin "F3" features large packages — for greatly increased doffing cycle — result, *lower labor and winding costs.*

Bijur automatic lubrication on the Whitin Spinning Frame meters just the right amount of oil at the right time to all head end bearings while the frame is running — result, *lower operating and maintenance costs.*

Specify Bijur lubrication on all new mill equipment you buy — result, *longer machine life, low maintenance, increased production.*

A Bijur engineer can solve your lubricating problems on all textile machinery.

TEXTILE MACHINERY AMERICAN EXHIBITION ASSOCIATION ATLANTIC CITY APRIL 26-30 1954

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N-5

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LUBRICATING CORPORATION

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Pioneers in Automatic Lubrication

What the TEXTILE MILLS are doing

Equipment has been installed to produce a line of coarse cotton products.

A. D. Juilliard & Co., Inc., has sold 127 of its houses in Brookford, N. C., to employees. The Atlantic division mill in Providence, R. I., has been liquidated, and the mill property of the Standard Silk division near Utica, N. Y., has been sold.

An expansion in production is planned at **Kent Hosiery Mills, Inc.,** Chestertown, Md. A controlling interest in the firm was recently acquired by Debonair Hosiery Mills, Inc., New York City.

What is believed to be the first cotton mill in San Joaquin Valley, California's cotton-producing area, will be established at Hanford, Cal. A corporation has been formed under the name of **Kings County Cotton Mills** to operate the enterprise, which will spin cotton fibers into yarns for sale to the industry.

A new mill at Butner, N. C., is now being operated by **Lee Dyeing Co.,** Johnstown, N. Y. Dyeing tricot fabrics is the specialty.

Lehigh Spinning Co., Allentown, Pa., has installed equipment to increase by 100% over 1953 the mill's output of synthetic pile yarns for both tufted and woven soft-surface floor coverings. Four modern twisters and a battery of special precision winders are among the machines installed.

The recently chartered **Lombardi Patented Fabrics, Inc.,** will manufacture knitted outerwear products. The firm is represented by Jean Maniscalco, 51 Chambers St., New York City.

A new mill, now under construction at Starkville, Miss., will be occupied under long term lease by **Lockport Felt Co.,** Newfane, N. Y. The Newfane plant will also continue in operation.

Longview Yarns, Inc., Hickory, N. C., has been incorporated for manufacture of cotton yarns.

Linen Thread Co. recently acquired the following companies: **Ederer, Inc.,** Philadelphia, cotton and linen netting, threads, etc.; **R. J. Ederer Co.,** Chicago, linen fish nets, netting;

Four Aces OF DYEING

Nonionic* Dyeing Assistants

♥ **Telkanol O**—Effective levelling agent and dyeing assistant for wool, unions and furs. Its strong dispersing action for oils and fats makes it an excellent scouring agent in the acid or alkaline scouring of wool and wool wastes. Exhibits high resistance to acids, alkalies, salts and hard waters.

♠ **Dextrol Fast Salt M**—Dyeing assistant for acid metallized dyestuffs on wool. Reduces amount of sulfuric acid normally needed, cuts dyeing time, increases solidity of shade. Color fastness is improved for perspiration, rubbing and decatizing. Helps prevent loss of tensile strength of fiber.

♦ **Rexan O**—Promotes level dyeing and penetration with direct, basic and vat dyestuffs on all fibers except wool. Exhibits good wetting powers in dyebaths. Eliminates use of glue in vat dyeing and retards rate of exhaustion in first few minutes without impairing total color yield on the fiber.

♣ **Telkanite M**—Highly effective stabilizing agent and assistant for all types of napthol dyeing and printing. Has high stability and dispersing properties in acid medium which makes it particularly suitable for the pasting up and dispersing of bases.

*Polyoxyethylated fatty alcohol

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Be sure to see WHITIN'S "BIG 10"

These machines can be seen in operation in Booth 180 at the

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APRIL 26-30, 1954 · ATLANTIC CITY, N. J.

1 **Winder for Filling Bobbins . . .**
A completely new fully automatic high speed winder. Designed for maximum production and lowest winding costs.

2 **Roto-Drafter . . .** Introducing an entirely different type of machine for processing top on the American System. This is probably the most versatile textile machine ever produced.

3 **Roving Frame . . .**
A large roll roving frame with many significant special adaptations for use on American System.

4 **Spinning Frame . . .** A large roll machine with many new features, likewise purposely adapted for use as an integral unit of the American System.

5 **Up Twister for Tire Cord . . .**
An outstanding machine with a superb performance record, never before exhibited. Designed for heavy duty, high production tire cord twisting.

6 **Wool Spinning Frame . . .**
A new frame incorporating more than 20 features of great value, hitherto unavailable.

7 **Drawing Frame . . .**
A modern draw frame producing even high quality sliver for cotton or synthetic fibers.

8 **Roving Frame . . .**
A large package (12 x 6½) roving frame featuring the renowned Whitin Inter-Draft system.

9 **Spinning Frame . . .**
A large package, long traverse spinning frame with many important and substantial design modifications and improvements.

10 **Ring Twister, All Purpose . . .**
An outstanding heavy duty, all purpose twister designed for maximum production, low operating costs, and long life.

In addition to this machinery display, we will also have in Booth 24 (on the stage) an interesting exhibit of Repair Parts and Supplies.

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FOR CRUSH-RESISTANT COTTONS

For cotton dress goods that are permanently crush-resistant, you can depend on RHONITE R-1. This washfast resin imparts to cottons, rayons and blended fabrics a crush-resistance and stability so durable that repeated washings can't dull their crisp good looks.

In plain, calendered or embossed finishes, RHONITE R-1 produces this same resistance to crushing and wrinkling, makes fabrics withstand many launderings and still retain a lasting beauty.

For unusual crush-resistance, it pays to use RHONITE R-1.

Write or call for complete information about RHONITE R-1—one of the quality chemicals for textile finishing made by Rohm & Haas Company.

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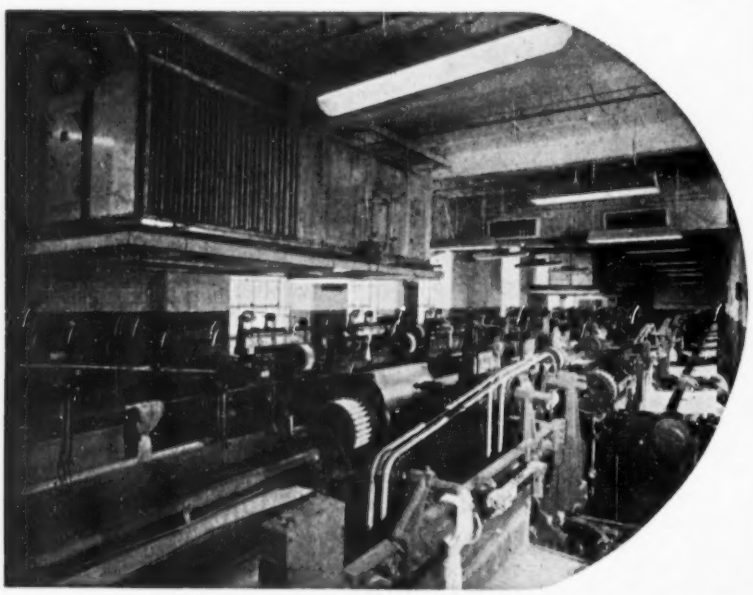


Synthetic yarn weaving room with new WHITE suspended air washers in Grendel plant of The Abney Mills, Greenwood, S. C.

What the TEXTILE MILLS are doing

Pauls Fish Net Co., Chicago; and **Adams Net & Twine Co.**, St. Louis, jute netting. The purchase included plants, equipment, brands and trademarks, etc.

A machine lace plant is being operated by the recently organized **Luv-Lee Lace Corp.** Morris Pajonk, 3229 Bergenline Ave., Union City, N. J., is representative.

The **Lykens Hosiery Mill, Inc.,** has moved from Lykens, Pa., to a new mill at Marion, N. C. An addition to the plant building, to double production capacity, is planned.

A new company, known as **George D. McKinney Co.** and headed by the president of the Independent Association of Stocking Manufacturers, has been formed to purchase all hosiery waste directly from the mills.

The Spool Cotton Co. has announced that its corporate name has been changed to **Coats & Clark's Sales Corp.,** so that the organization's selling and manufacturing branches could be better identified.

Millbrook Manufacturing Co., Inc., Lowell, Mass., has been organized to manufacture cotton fabrics for drapery and other service. Morris A. Ullian is president and treasurer.

A yarn storage warehouse has been established in a two-story building in Ridgewood, Long Island, N. Y., for the **National Spinning Co.,** New York City. A laboratory is located in the building, as well as certain office facilities.

Novelty yarns are being manufactured by the recently organized **J. R. Newell Co.,** Carrollton, Ga. The novelty yarn equipment of Mandeville Mills, Inc., recently sold to Comer Machinery Co., has been purchased by Mr. Newell, former president and treasurer of Mandeville.

A one-story addition to the plant, to have about 10,000 sq ft floor space, is under construction by **Norwich Knitting Co.,** Clayton, N. C.

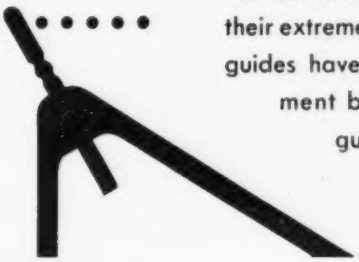
Whisnant Hosiery Mills, Inc., Hickory, N. C., has sold its Maiden, N. C., plant to **Overbrook Hosiery Co.,** York, Pa. An addition to the knitting room of its main plant is under construction to accommodate machinery now at Maiden.

AlSiMag®

THREAD GUIDES

Textile machinery manufacturers have found that AlSiMag guides increase the quality of their machines and result in greater customer satisfaction. Because of their extreme hardness, uniformity and long life, AlSiMag guides have been adopted for machinery and equipment by most machinery manufacturers. These guides are available in a variety of compositions and finishes to meet your particular problems and requirements.

FREE TEST SAMPLES of standard designs sent on request. Test samples to your specifications made at reasonable cost without tool or die costs. Your own tests will prove you can speed processing, reduce down time, improve quality, and save money with AlSiMag guides.



Standard designs available in stock

FOR ALL MAKES OF TEXTILE MACHINERY

FAMOUS NAMES in textile machinery

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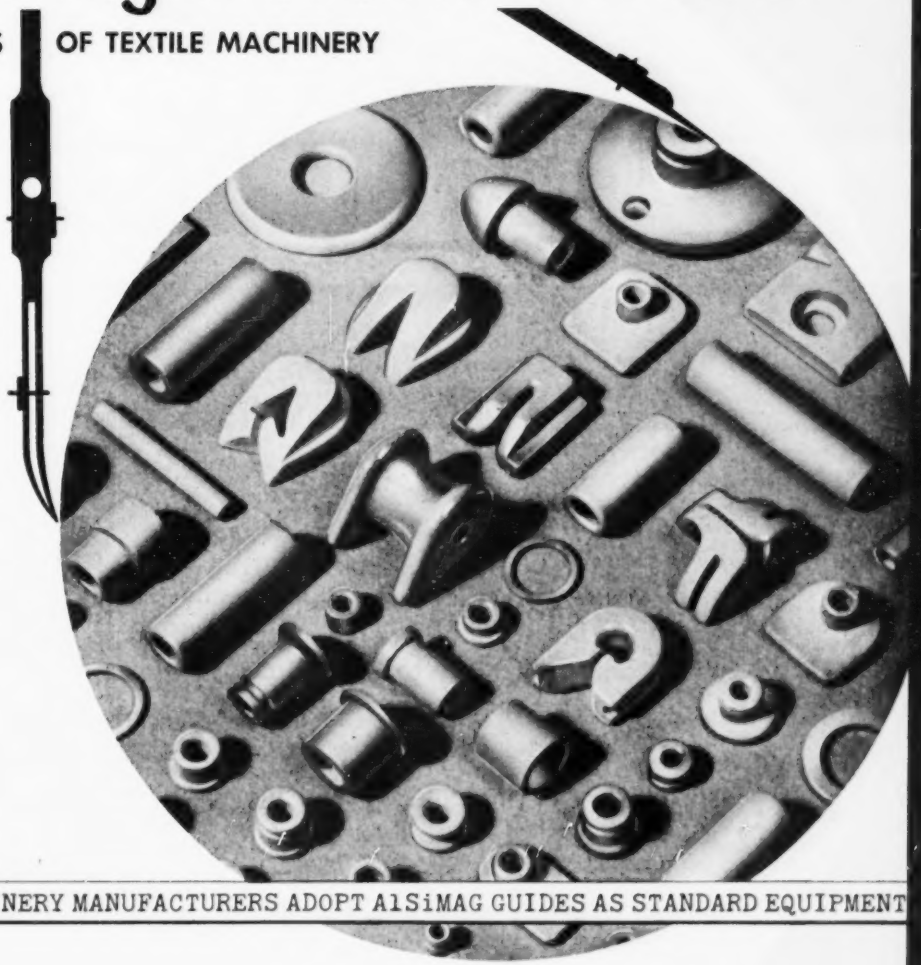


MORE AND MORE LEADING MACHINERY MANUFACTURERS ADOPT AlSiMAG GUIDES AS STANDARD EQUIPMENT

SEE BOOTH NO. 21

AMERICAN TEXTILE MACHINERY EXHIBITION ASSOCIATION
ATLANTIC CITY APRIL 26-30 1954

52ND YEAR OF CERAMIC LEADERSHIP

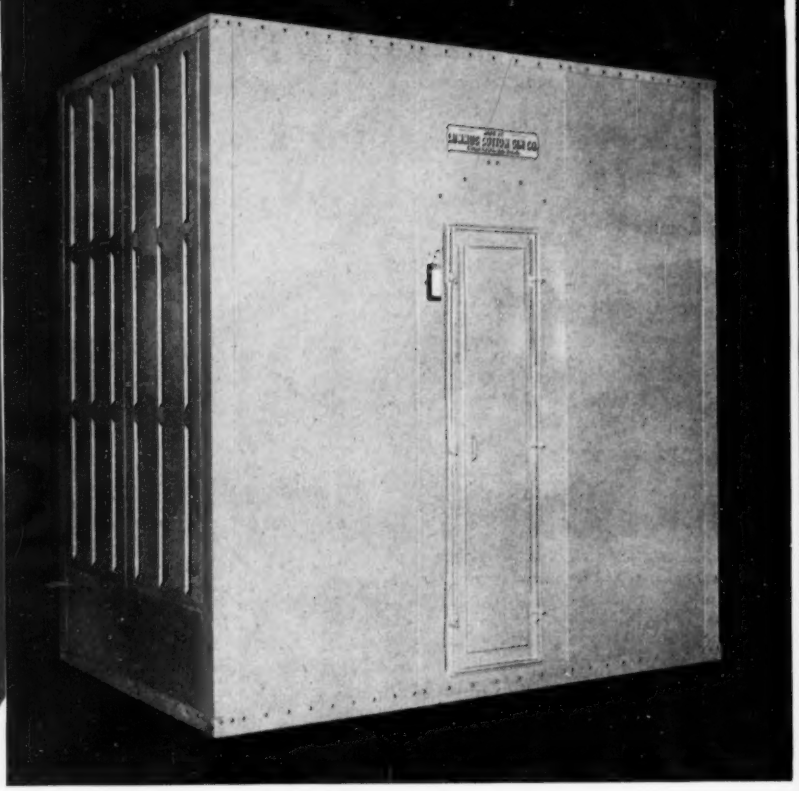
AMERICAN LAVA CORPORATION

A SUBSIDIARY OF MINNESOTA MINING AND MANUFACTURING COMPANY

CHATTANOOGA 5, TENNESSEE

SALES ENGINEERS: NORTH AND EAST: Jay S. Gaynell, 671 Broad St., Newark, New Jersey, Mitchell 2-8159. SOUTHEAST: Joe E. Spearman, American Lava Corporation, Chattanooga 5, Tenn., 5-3411. ALL OTHER AREAS: J. B. Shacklett, American Lava Corporation, Chattanooga 5, Tenn., 5-3411. CANADIAN REPRESENTATIVE: Ian M. Haldane and Company, Post Office Box 54, London, Ontario, Canada. CONTINENTAL EUROPEAN REPRESENTATIVE: P. C. Huguenin Luzern, Gerbergasse 6, Luzern, Switzerland.

A FILTER THAT *REALLY CLEANS* DUSTY AIR!



THE LUMMUS AIR FILTER FOR TEXTILE MILLS

This filter has no moving parts, and separates the dust from the air by passing it through a non-woven fabric which is highly porous, but of such fine texture that it traps not only the lint, but all of the dust. The filter illustrated is 9'x5'6", and 8'11" high. Pipes may be brought into it either from the top or the bottom.

It is suitable for handling the air exhaust from opening machinery, pickers, cloth brushers, cloth shearers, or any other machinery discharging air containing foreign matter which needs to be separated from the air.

In cold weather it will save its cost in a short while by returning warm air to the mill instead of blowing it outdoors.

Made by LUMMUS COTTON GIN CO. Columbus, Ga.

Sold and Installed by Aldrich Machine Works

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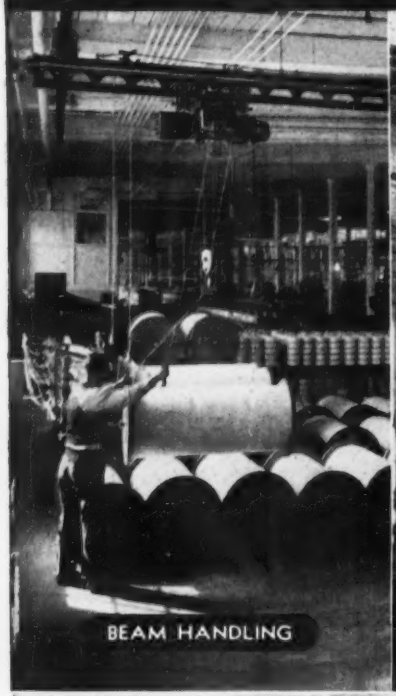
TEXTILE MILLS BOOST EFFICIENCY *with* CLEVELAND TRAMRAIL



BEAM HANDLING

RAW STOCK HANDLING

PACKAGE DYEING

CLOTH HANDLING — AUTOMATIC DISPATCH

Efficiency — meaning costs and output of product — has been greatly improved in many textile mills with installation of Cleveland Tramrail, even with other production facilities remaining the same.

During the period following the war it is predicted that the use of Cleveland Tramrail will be accelerated tremendously because textile mills will require more efficiency in operation than ever before if they wish to remain in a favorable competitive position.

No other machinery offers as great returns for the small investment required as overhead materials handling equipment.

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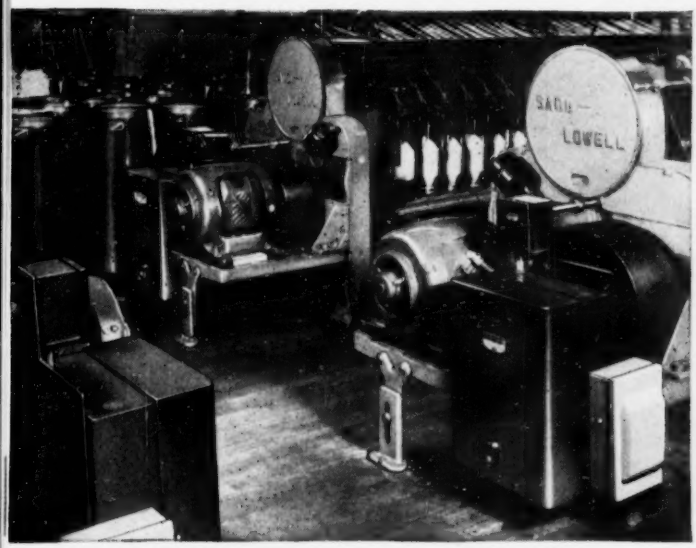
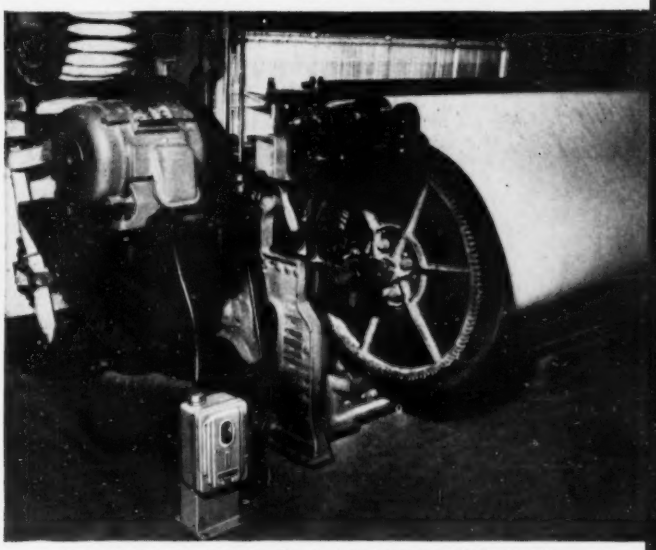
CUTLER-HAMMER

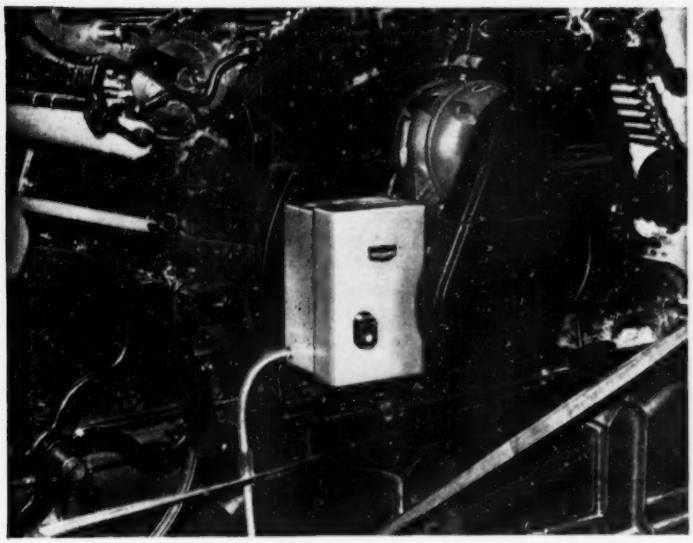
MOTOR CONTROL FOR THE TEXTILE INDUSTRY



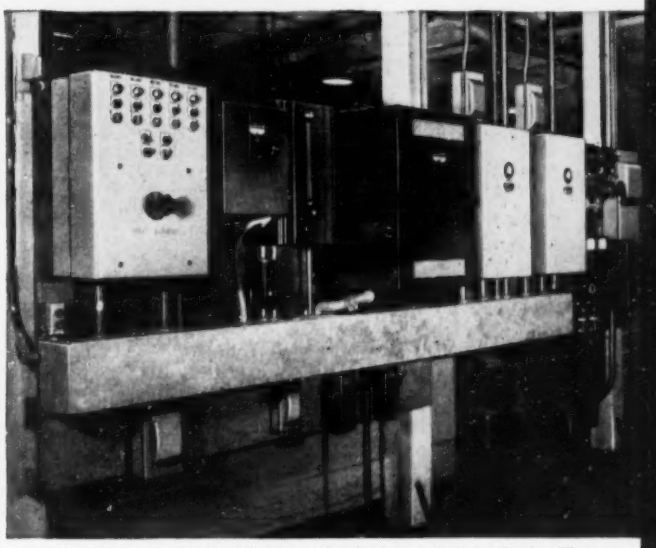
FOR STATESVILLE—Typical installation of Cutler-Hammer Smooth Starters and Shipper Rod Switches. STATESVILLE DIVISION, The Seminole Mills, Statesville, N. C.



C-H LOOM SWITCHES—Typical installation of Cutler-Hammer Loom Switches on unique C-H Welded Pedestals. Leward Cotton Mills, Inc., Worthville, N. C.



C-H CARD CONTROLLERS—Typical installation of extra-safe Cutler-Hammer Card Controllers. Charles H. Bacon Company, Lenoir City, Tenn.



C-H RANGE DRIVE CONTROL—Typical installation. Cutler-Hammer Electronic Dancer Roll Regulator and Range Drive Controller for slack drying range at Mooresville Mills, Mooresville, N. C.

More and more their choice

Men who select and purchase textile mill production equipment can have but one goal in mind. They *must* buy wisely because the production of the mill is a measure of the wisdom of their choice. When it comes to motor control, they buy with extra care. For motor control is pivotal equipment, guiding and guarding motor and machine performance. More and more the choice of these men falls upon Cutler-Hammer Motor Control. For they know from experience that Cutler-Hammer dependability is no mere competitive claim. They know it is the earned advantage of the longest and most intensive specialization in motor control engineering . . . a fact that stands out clearly in a mill's production records to reflect favorably on their own ability and good judgment. They know that Cutler-Hammer can furnish any type of control needed . . . from the simplest starters to the most complex electronic equipment.

You too will find it pays to insist on Cutler-Hammer Motor Control and refuse all substitutes. An adequate network of Authorized Cutler-Hammer Distributors throughout the textile manufacturing areas insures prompt attention and supply. CUTLER-HAMMER, Inc., 1456 St. Paul Avenue, Milwaukee 1, Wisconsin.

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MOTOR CONTROL
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ATLANTIC CITY EXHIBITION

STEAM...is only as good as you use it!

Use steam the right way to reduce production costs, improve product quality and output—

When production slow-downs, high costs, and poor product quality occur, don't always blame the process equipment—often the fault is in *the way steam is used.*

For example, waterlogging caused by improper trapping or poor steam circulation, seriously affects heat transfer, reduces output, and creates production bottlenecks. Improper air venting does the same. Poor temperature control can lower product quality, cause rejects and further raise production costs.

If your plant is suffering from any of these production handicaps, Sarco can help you.

Plant after plant has benefited from Sarco's experience in the process industries. The complete line of Sarco steam traps and temperature controls enables Sarco engineers to offer impartial, expert recommendations on how to make steam work best in your plant.

Why not call on Sarco for engineering recommendations next time you need help. For case histories describing how other plants in your field solved similar problems, write today to Sarco Company, Inc., Empire State Building, New York 1, N.Y.

SARCO

improves product quality and output

why cylinders waterlog

1. Condensate being discharged.
2. Condensate discharged. Syphon pipe fills with steam.
3. Cylinder waterlogs because condensate is blocked by steam lock in syphon pipe. Waterlogging continues until locked steam condenses.

Most machines discharge into closed return systems and low output caused by intermittent waterlogging is often mistakenly accepted as "normal."

How cylinder dryer output was increased 15%

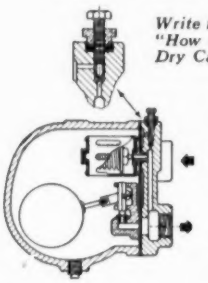
Installation: Eclipse Piece Dye Works, Passaic, N. J.—15-Cylinder piece dryers.

Problem: Air binding and waterlogging caused temperature variations across cylinder faces. Piece goods dried slowly and unevenly.

Solution: A Sarco trap with a built-in *steam-lock release* valve and a thermostatic air vent was installed on each cylinder. Air vents in these traps discharge air, gases and air-steam mixtures which are often 20° *below* steam temperatures.

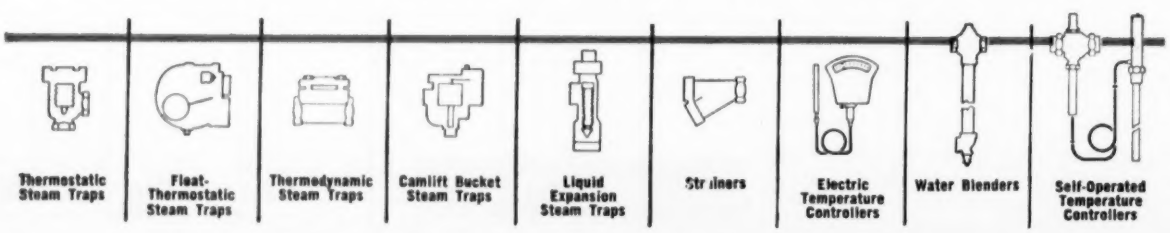
Results: Maximum temperature maintained across each cylinder. Subsequent performance records showed that dryer output increased 15%.

Write for Technical Bulletin No. 2 "How to Increase Output of Your Dry Cans."

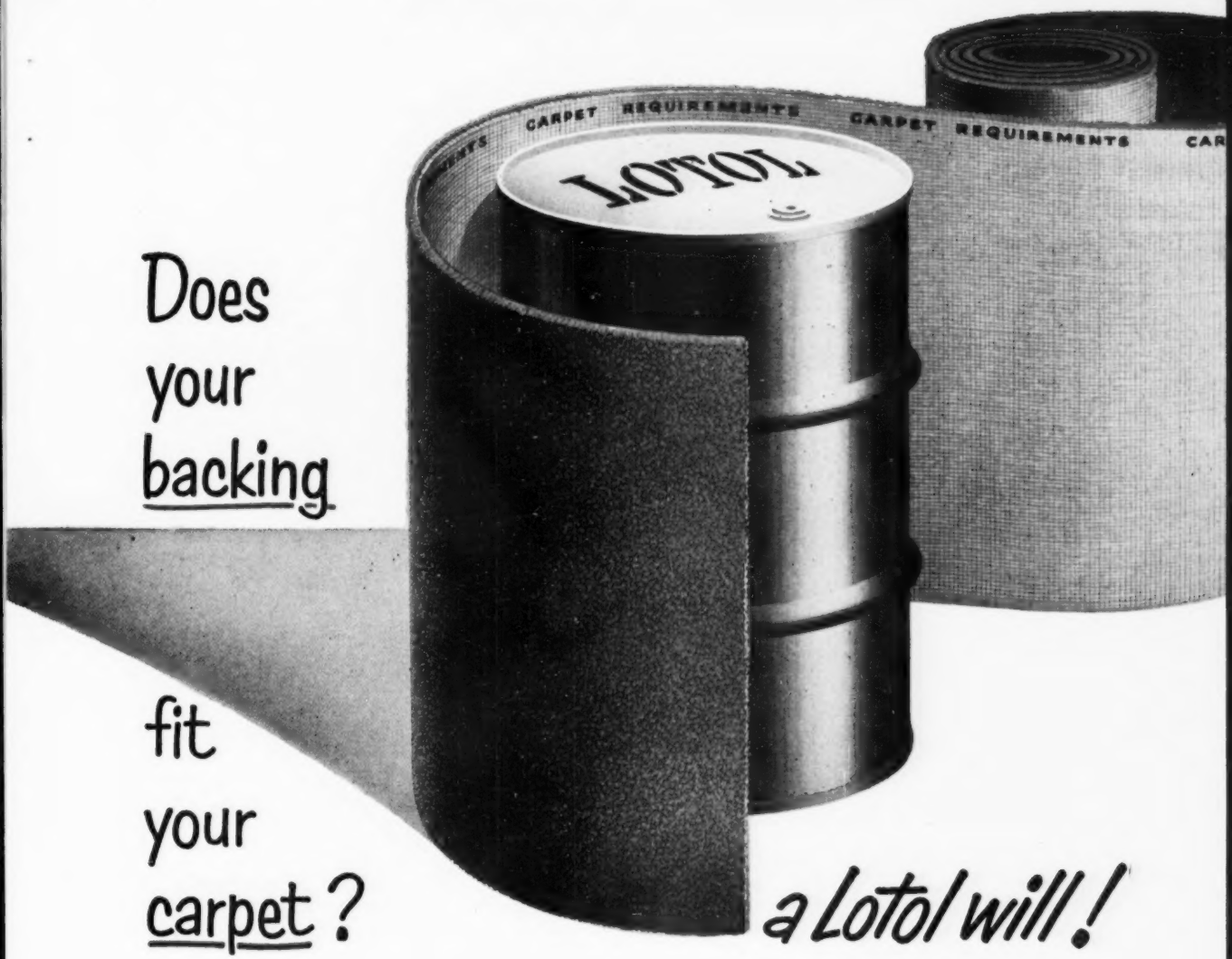


The steam-lock release valve in this Sarco trap prevents intermittent waterlogging by breaking steam locks in the syphon pipe. This large capacity trap discharges condensate as quickly as it collects.

STEAM TRAPS • TEMPERATURE CONTROLLERS • STRAINERS



Thermostatic Steam Traps | Float-Thermostatic Steam Traps | Thermodynamic Steam Traps | Camlift Bucket Steam Traps | Liquid Expansion Steam Traps | Strainers | Electric Temperature Controllers | Water Blenders | Self-Operated Temperature Controllers



Does your backing fit your carpet?

a Lotol will!

Lotols are latex compounds *custom-made* to fit your *specific* backing requirements.

They are expertly designed to give you *full benefit* of recent advances in latex technology.

What do you want in your carpet?

- Improved **hand and body?**
- Better **pile anchorage?**
- Freedom from **dye discoloration?**
- **Permanence** of backing?

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TOP NAMES IN TEXTILES NOW USE CYCLELOG CONTROLLERS

When leading companies like those listed at the right adopt a new and unique instrument, there must be a good reason. Yet this is only a partial list of today's CycleLog* users!

Whether you're dyeing wool, cotton, rayon, nylon or other synthetics, or blends, in the form of piece goods, skeins, tops, packages, raw stock, hosiery, or slubs, the CycleLog gives you the most completely automatic control ever developed.

You can control from a distant dye house office†, or at the kettle. No matter what your dyeing temperature schedule may be, it is easily and precisely set up, in a matter of seconds, by turning the knobs on the face of the instrument. *No cams!* And pushing a button starts, or repeats, any cycle.

Write for detailed Bulletin 438, and let us make recommendations for your particular problem. The Foxboro Company, 483 Neponset Ave., Foxboro, Mass., U. S. A.

* TRADE MARK

†A new electronic CycleLog is designed specifically for this use.

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Bishopville Finishing Company (A Division of Reeves Bros., Inc.)
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Delta Finishing Co.
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Excelsior Finishing Plant (Deering Milliken)
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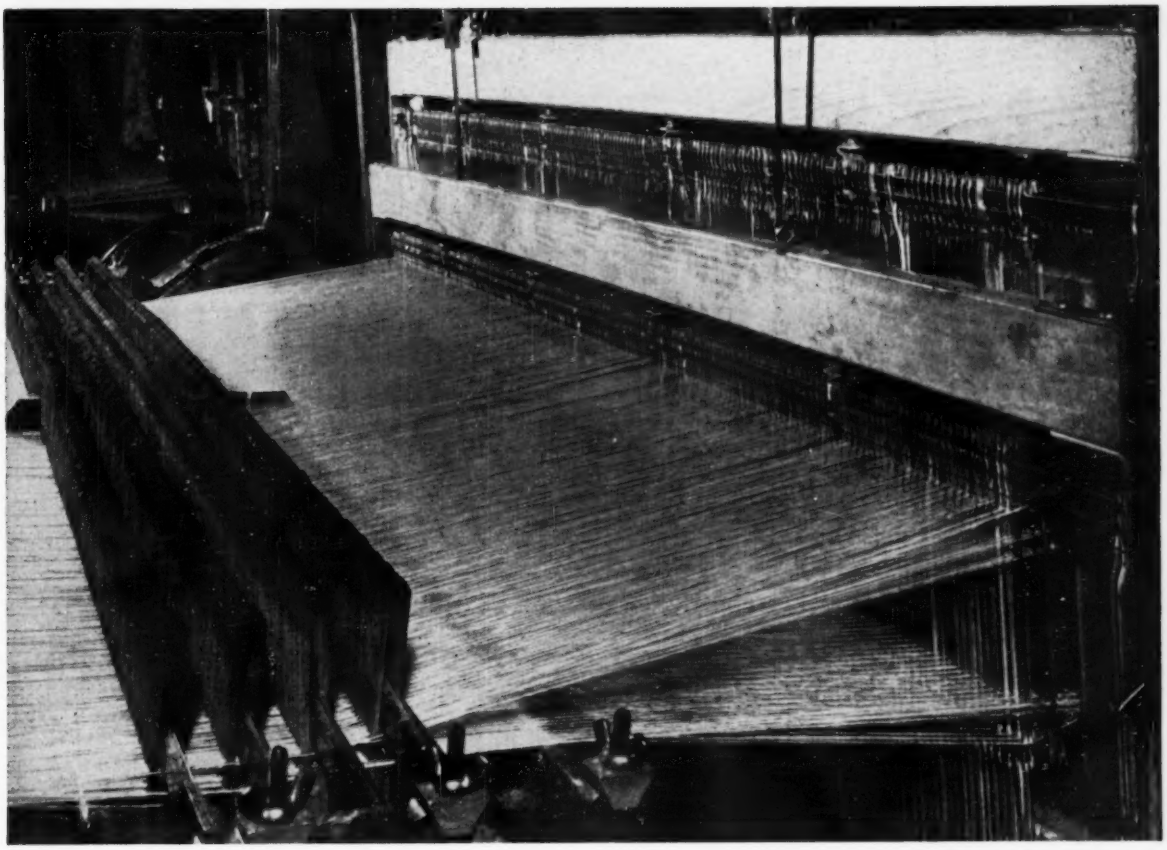
FACTORIES IN THE UNITED STATES, CANADA AND ENGLAND



Each adds strength to the whole

Just as every strand of yarn, whether warp or filling, is important in making cloth of superior construction, so every one of the 17,500 Cone employees is an important part of the total organization.

It is through the combined skill of all employees that fibers are processed into strands of good yarn which fall into their proper places to form Cone fabrics of highest quality.

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A COMPLETE LINE OF STARCHES, GUMS & DEXTRINES

Highly recommended for their greater cleanliness, superior uniformity, stability of viscosity, and constant availability

GLOBE BRAND CORN STARCH

This starch is ideal for warp sizing carded or combed yarns where a thick boiling starch is advantageous or for use in homogenizers. Globe Pearl Corn Starch produces strong films, reducing breaks on the slasher and loom.

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This thin boiling starch is popular for warp sizing carded and combed yarns. Available in all fluidities, permitting viscosities required to maintain correct size concentrations for best weaving.

HERCULES BRAND CORN STARCHES

Oxidized starches are used in a wide variety of sizing applications. They produce a smooth but tough film.

WARP SIZING FOR SPUN RAYON BLENDS OR SYNTHETIC FIBER SPUN YARNS

Globe Gum and Dextrines have been popular for many years for warp sizing spun rayon. They have the superior qualities recommended for easy de-sizing.

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Globe Brand extra thick starches have less setback and make a smooth paste with reduced congealing on cooling, producing superior pastes for backfilling and printing.

Globe Gum and Dextrines fill many finishing requirements. They are versatile and are in increased demand because of their application ease, full compatibility and fabric versatility.

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is better than ~~ain't what~~ she used to be

Thanks to Meadows "Conversions," thousands of long-service spinning and twisting frames... many of them old enough to have been "turned out to pasture" . . . are running faster and smoother, and turning out more yarn than they did in the yearling days.

A typical Meadows "Conversion" consists of the installation of individual drive pulleys, ball bearing tape tension pulleys, aluminum alloy separators, silent chain drive—and high strength polished and ground steel shafting, mounted on heavy-duty, self-aligning ball bearings.

The result is lower power consumption, even tension at all times, a more uniform speed and twist, fewer ends down, and increased yarn production . . . at far less than the capital investment cost of new frames. Can be quickly and easily installed. Write or call us for estimate and particulars.

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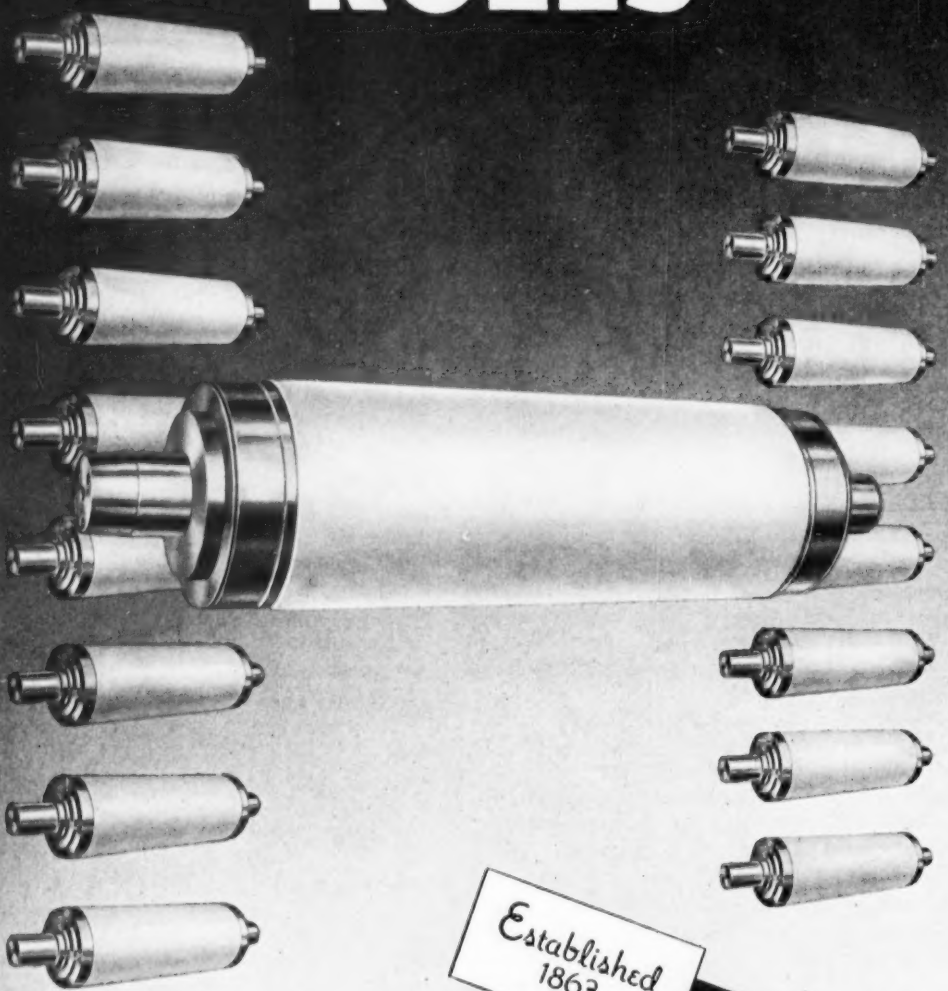
"HOLYOKE" CALENDER ROLLS



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"It's The Best Way to Get The Background of Customer's Trouble"

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It's smart to be SEYCO-analyzed!

If you have a WARP mind, call your SEYCO-analyst, who is always ready to discuss and help you with your WARP problems.

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PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS • TWIST SETTER MACHINES •

"Lubricating Tenter Machines was a Tough Problem!"...

A large Georgia manufacturer of print cloth and gauze went to considerable expense to install a tenter machine in his mill. Knowing of the lubricating problems associated with units of this kind, he decided to call in Sinclair Lubrication Engineer, Lewis Kay.

Mr. Kay reports, "Upon checking the machine, I noted the chain slides would be working under conditions of extreme heat and moisture. Based on my experience, I reasoned that grease would not do a satisfactory job — so the suggestion was made to install the necessary fittings to use *oil.*"

Mr. Kay continues, "I recommended Sinclair RUBILENE® H.D. because this oil is compounded to hold sludge and carbon in suspension while resisting the effects of high temperature and moisture."

"The results were highly satisfactory," says Mr. Kay. "RUBILENE has prevented any necessity for replacement of expensive chain links – there is no problem with sticking links and power drag is at a minimum."

Why not give a Sinclair Lubrication Engineer the chance to help solve your lubrication problem. *There's no obligation.* Contact your local Sinclair office or write Sinclair Refining Company, 600 Fifth Avenue, New York 20, N. Y.

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DOW CAUSTIC SODA

If you haven't figured your caustic costs recently, you may be pleasantly surprised at the economy 73% can bring. Increasing freight rates are erasing the savings in 50% caustic solution for more and more users every day—they're probably doing the same for you.

If you'd like help in figuring the most economical caustic for your plant, our Alkali Sales Department will gladly lend a hand. THE DOW CHEMICAL COMPANY, Midland, Mich., AL 900F.

you can depend on DOW CHEMICALS

DOW

Take Your Pick

OF THESE HIGH POTENCY STARCH OR PROTEIN DIGESTANTS

Amprozyme Liquid

For quick and efficient removal of normal textile sizes such as starch, dextrine, etc. Amprozyme Liquid is suitable for use with any type equipment (pad, jig, beck), or in continuous method after singeing. Amprozyme Liquid is adapted for high temperature desizing.

Protozyme Liquid

High potency proteolytic enzyme for fast removal of protein sizes or deposits—glue, gelatin, albumin, etc.

JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.

We will be happy to send you complete details and samples of either one, or both, of these products. There is no obligation.

1-hp, 1750-rpm, 550-volt, 3-phase Type APKL motors designed especially for loom service. Available in ¾, 1, 1½ and 2 hp at 1200 and 1800 rpm with or without flywheel. Left — ball bearing type; right — sleeve bearing type.

NEW
LOOM MOTOR

Exhaustive tests prove this motor sets new electrical and mechanical standards. Mill operators get lower maintenance and longer life because of: low temperature rise . . . large rotor inertia . . . large bearings . . . small speed pulsation.

Research to solve motor problems caused by rapid cycling of high speed looms has resulted in this new Allis-Chalmers motor.

The rotor has been made extra heavy and in the largest possible diameter to provide maximum flywheel effect (WK^2) to meet the new and greater demands on loom motors from the higher and higher loom speeds of the past few years. Under some conditions a flywheel is mounted on the motor shaft to provide still more WK^2.

This motor is available with oversize greasable ball bearings, or sleeve bearings packed with wool waste to keep oil in place. In case of over-oiling in the latter type, provision is made for excess oil to drain to the outside, thus preventing damage to windings.

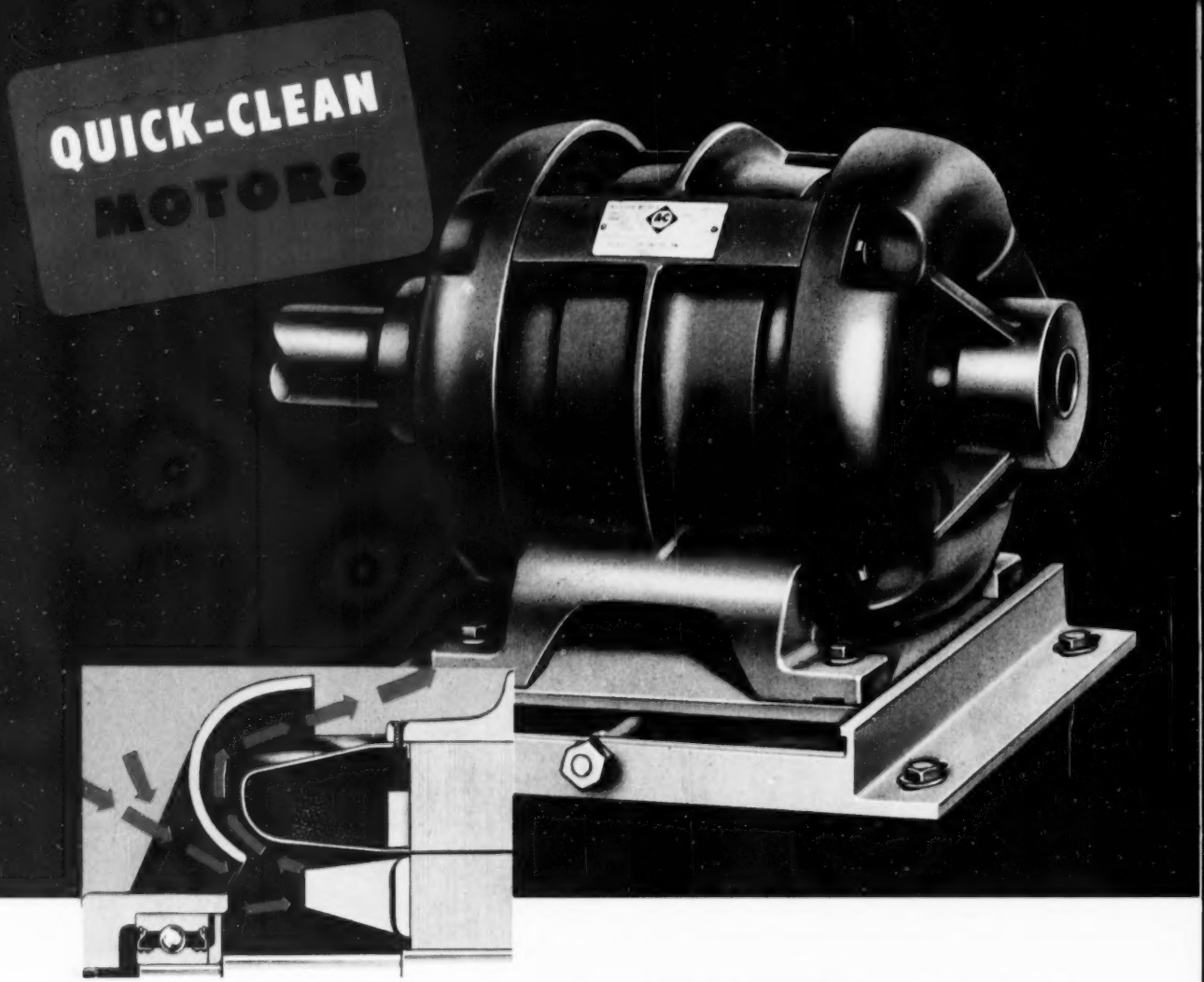
Get Complete Details

While this Allis-Chalmers loom motor is a completely new design from top to bottom, it has been in actual use in quantity for over a year. Get all the details on what this motor can do for your loom operation from your nearby Allis-Chalmers District Office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin and ask for Bulletin 51B7111.

Matched Allis-Chalmers Loom Switch
Specially built for starting loom motors. Designed to fit the starting requirements of the new Allis-Chalmers loom motor. Buy the easy, economical way. Get the complete power unit — both motor and starter — from one reliable source, Allis-Chalmers.

A-4297

ALLIS-CHALMERS



get the motor dirt and lint can't stop!

There's no motor problem caused by lint-laden atmospheres that can't be solved using *Quick-Clean* textile motors.

Powerful fans sweep lint and dirt through wide open air passages — and right out of the motor.

Sealed and pre-lubricated double width, single row, ball bearings are an important feature of the *Quick-Clean* motor. They will operate for long periods without attention of any kind. When motor is dismantled, they may then be cleaned and repacked. Inside face of bearing is protected from lint by a collar pressed onto motor shaft.

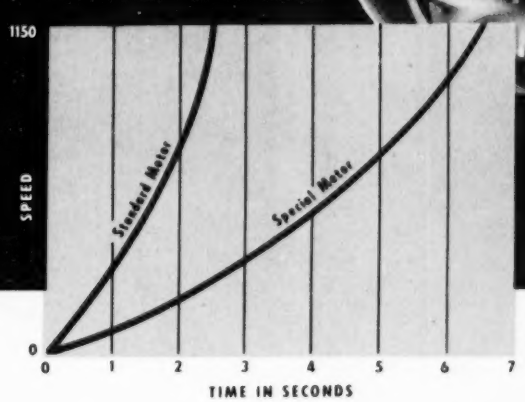
In addition Allis-Chalmers can supply control and *Texrope* V-belt drives to meet complete machine drive needs.

For complete information ask your Allis-Chalmers distributor, or district office representative.

ALLIS-

ALLIS-CHALMERS

ROVING FRAME DRIVES



slow starts, fine jogging —without special control

Slow, smooth acceleration, using Allis-Chalmers roving frame motor, reduces ends down, helps produce uniform roving. No special resistors — no acceleration reducing clutches — no special control is required.

Slow, smooth acceleration of motor (almost three times as long as a standard motor) provides e-v-e-n tension on the roving during starting periods. Special conduit box connections permit relatively high torque when required, such as during "break-in" period of the frame.

Quick-Clean frame design allows powerful fans to sweep lint and dirt in and out with the cooling air.

In addition Allis-Chalmers can supply control and *Texrope* V-belt drives to meet complete machine drive needs.

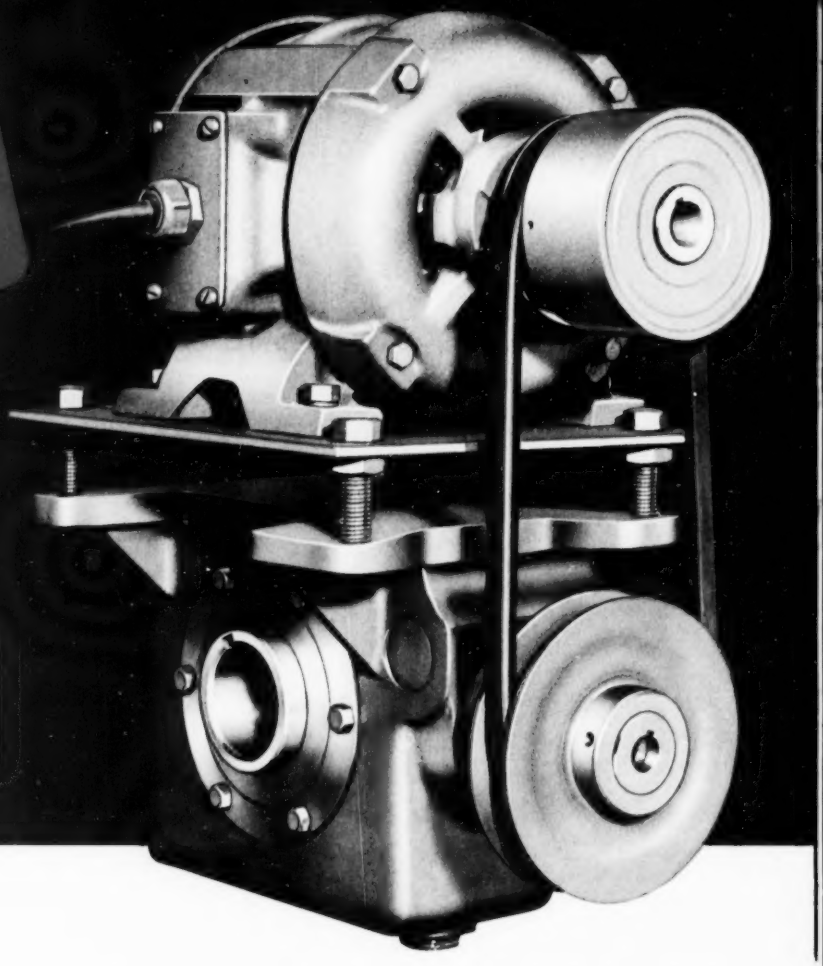
Call your Allis-Chalmers distributor or district office. Or, write Allis-Chalmers, Milwaukee 1, Wisconsin.

CHALMERS

A-C ALLIS-CHALMERS

ALLIS-CHALMERS

CARD DRIVES



Quick-Clean motor drives gear reducer through *Texrope* V-belt drive and centrifugal clutch.

make your card room safer, cleaner, lighter

Today's trend is to individual card drives. Overhead line shafting creates problems in lighting, cleanliness and safety that are only solved by individual drives. In addition, usual duct arrangements for air conditioning are difficult with the overhead drive.

Allis-Chalmers combines a *Quick-Clean* motor, *Texrope* drive and highly efficient gear reducer to make a compact, reasonably priced power package for cards.

There's no need to move cards to install this drive. Unit requires practically same floor space as tight-and-loose pulley drive. It is mounted directly on card shaft — independent of the card arch — with torque arm to keep the gear box from rotating. No strain on card arch to cause vibration or distortion of air gap between flats and main cylinder.

Cuts maintenance, too! No heavy, expensive belts to replace . . . no periodic belt dressing. In addition, drive is practically vibrationless, increasing life of card and making it easier to keep in adjustment. There's also a special reversing starter for this drive to permit grinding the clothing. Get details from your nearby A-C district office or distributor, or write Allis-Chalmers, Milwaukee 1, Wisconsin for Bulletin 51B7867.

Quick-Clean and *Texrope* are Allis-Chalmers trademarks.

ALLIS-CHALMERS

A-C ALLIS CHALMERS

How to produce more at less cost ...increase profits!

Alemite methods of transferring lubricant to bucket pumps proved 63% faster by actual on-the-job time study!

An important saving in transferring lubricant—but even more important than the man-hours saved are the *machine*-hours saved—the costly repairs that don't have to be made, the increased bearing life. And the reason for these savings is that only "refinery clean" lubricants reach bearings—machines operate at peak efficiency longer—unit costs go *down!*

Alemite transfer pumps fit directly into refinery drums, fill a portable bucket pump in *less than a minute* with no air pockets, no spillage, mess or waste. Then, the large capacity of the bucket pump allows servicing of hundreds of bearings without stopping for refilling.

There is an Alemite transfer pump and bucket pump combination just right for your plant, big or small. Transfer pumps are available for 100 and 400 pound drums, all types of lubricant. And you will find a bucket pump to service any machine—to handle lubricants from the lightest oils to heaviest, high pressure greases. Wide range of capacities, developing pressures as high as 15,000 psi. All of them are tightly sealed—preventing contamination, reducing fire hazards.

With Alemite Plan "B" Only Refinery Clean Lubricant Reaches Machines

A 400 pound barrel of lubricant arrives at the plant oil room—sealed, fresh, "refinery clean."

An Alemite transfer pump is inserted in the bung-hole. It is threaded to fit and seal standard refinery bungs.

In less than a minute a twenty-five pound capacity bucket pump is filled with lubricant—free of contamination—no air pockets—no mess!

Now the bucket pump is ready to service hundreds of bearings without refilling—supplying lubricant that has been protected all the way from barrel to bearing!

This combination of transfer pumps and bucket pumps is known as Alemite Plan "B." It is one of the five Alemite plans that your trained Alemite representative can show you. Ask him about the colorful, new, informative slide film, "No Margin for Error," which will help you and your men cut production costs. No obligation, of course.

ALEMITE
REG. U. S. PAT. OFF.

A PRODUCT OF SW STEWART WARNER

Ask Anyone in Industry

Free! New Booklet "5 Plans for Better Plant Lubrication"

ALEMITE, Dept. M-34
1850 Diversey Parkway
Chicago 14, Illinois

Please send me my copy of
"5 Plans for Better Plant Lubrication"

Name .....
Company .....
Address .....
City ..... State .....

SUPREME'S *two-part pattern for your* KNITTING PROFIT

Supreme's pattern for your profit is two-fold . . . providing better knitting performance plus helpful service.

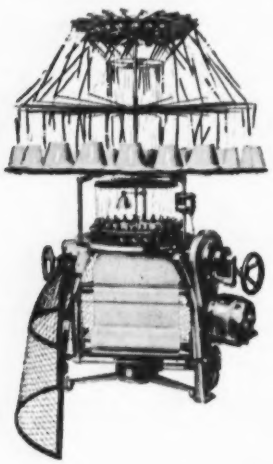
1. By combining multi-fabric versatility with super-speed production and low maintenance, Supreme machines assure you of maximum profit operation.

2. In addition, with every Supreme, you can get individual help on machine set-up, operation and maintenance, patterning, mill planning, etc.

Write for further information on any of the Supreme machines shown on this page.

PROFIT-KNITTING MACHINERY

For Example — Supreme's LRP



Supreme's new wonder-machine model LRP vent-knits open-stitch areas in a plain jersey background—produces air-cooled, run-resistant and elastic fabrics in a variety of beautiful patterns. This amazing machine profit-knits at rates up to 28 yards per hour—rayon, cotton or other yarn combinations may be used—perfect for summer and underwear fabrics.

HELPFUL SERVICE

Supreme follows through sales with service. Whenever required, Supreme's technicians provide individual assistance to the knitter to help him get maximum successful results from his Supreme machines. Pattern planning and analysis, engineering and maintenance information, in-the-mill instruction for knitter mechanics, mill-planning guidance are regular features of Supreme's service.

Here's a Free Sample of Supreme's Policy of Service —SUPREME'S NEW FABRIC and MACHINE SELECTOR— Slide rule chart identifies fabrics produced on each Supreme model. Includes actual fabric swatches. Gives diameter, feeds, needles per inch and production rates. Write for your free copy.

SUPREME
KNITTING MACHINE CO., INC.
94-02 104th STREET, OZONE PARK 16, N. Y.
Southern Representative and Showroom:
The Malluck Co., 711 S. Tryon St., Charlotte, N. C.

SK-169

The sun never sets on . . .

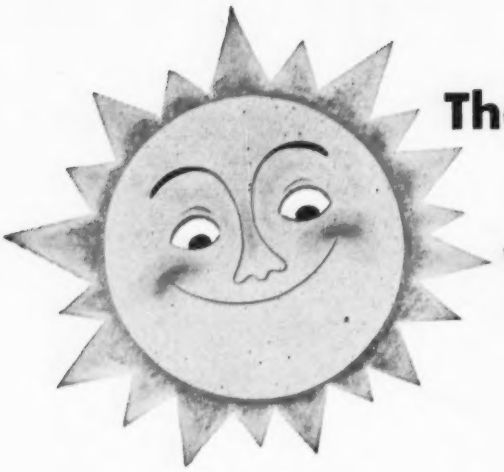
Wherever you go in this troubled world, you find cotton garments. Wherever you go, you find consumers buying "*Sanforized*"-*labeled* cottons.

The civilized world knows that when cottons shrink out of fit, it's money tossed away. This same world also knows that "Sanforized" on a cotton stands for *permanent fit, permanent style.*

IN 1954, 252 "Sanforized" licensees—famous textile firms throughout the world—will turn out TWO AND ONE-HALF BILLION YARDS OF "SANFORIZED" COTTONS.

To these 252 licensees—listed on the following pages—we hereby proudly give public recognition. They have played a major part in making the "Sanforized" label the most valuable sales tool ever handed a retailer!

PLEASE TURN PAGE →



The sun never sets on "Sanforized"!

WORLD-WIDE LIST OF "SANFORIZED" LICENSEES

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BRADFORD COTTON MILLS LIMITED.....“Bradmil House,” Camperdown, Sydney, N.S.W.

AUSTRIA
CARL GANAHL & CO.....Feldkirch
F. M. HAEMMERLE.....Dornbirn
POTTENDORFER SPINNEREI UND FELIXDORFER WEBEREI A. G. Vienna

BELGIUM
ALSBERGE & VAN OOST, S.A.....Gand
TEINTURERIES, BELGES S.A.....Renaix
VETEX, S.A.....Courtrai

BRAZIL
SAO PAULO ALPARGATAS, S.A.....Sao Paulo
COMPANHIA AMERICA FABRIL.....Rio de Janeiro
COTONIFICIO RODOLFO CRESPI, S.A.....Sao Paulo
CIA. JAUENSE DE FIACAO S.A.....Sao Paulo
S. A. INDUSTRIAS REUNIDAS F. MATARAZZO.....Sao Paulo
COTONIFICIO DA TORRE, S.A.....Recife
FABRICA DE TECIDOS CARLOS RENAUX, S.A. Brusque, Santa Catarina

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CANADIAN COTTONS LIMITED.....Montreal, Que.
CANBRI MANUFACTURING COMPANY LIMITED.....Ajax, Ont.
DOMINION TEXTILE COMPANY, LTD.....Magog, Que.
MONTREAL COTTONS LIMITED.....Valleyfield, Que.
ROBINSON COTTON MILLS, LIMITED.....Toronto, Ont.
WABASSO COTTON COMPANY, LTD.....Three Rivers, Que.
WOODS MFG. CO., LTD.....Welland, Ont.

CHILE
TEJIDOS CAUPOLICAN, S.A.....Concepcion

COLOMBIA
TEJIDOS EL CONDOR, S.A.....Medellin
COMPANIA COLOMBIANA DE TEJIDOS.....Medellin
FABRICA DE HILADOS Y TEJIDOS DEL HATO.....Medellin
TEJIDOS DE OCCIDENTE, S.A.....Manizales

CUBA
COMPANIA TEXTILERA ARIGUANABO, S.A.....Havana

DENMARK
BLOCH & ANDRESEN.....Copenhagen
AKTIESELSKABET DE FORENEDE TEXTILFABRIKKER I. AALBORG.....Aalborg
A/S GRENAA DAMPVAEVERI.....Grenaa
A/S VEJLE TEXTILFABRIK C. MULLER.....Vejle
A/S TH. WESSEL & VETTS FABRIKER.....Copenhagen

EIRE
SETFAST LIMITED.....Dublin

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BLANCHISSERIE ET TEINTURERIE DE CAMBRAI.....Cambrai
ETABLISSEMENTS RICHARD FRERES.....Cholet
ETABLISSEMENTS GAILLIARD & CIE.....Barentin
GILLET-THAON USINES: THAON-LES-VOSGES ET KINGERSHEIM Paris
TEINTURERIE, APPRETS GRASSIN DELYLE Malaunay (Seine-Inf.)
GUERRY-DUPERAY & FILS.....Roanne
MANUFACTURES HARTMAN & FILS.....Munster (Ht.-Rhin)
LAINE FRERES.....Rouen
TEINTURERIE G. ROQUETTE.....Wasquehal
ETABLISSEMENTS SCHAEFFER & CIE Pfastatt-le-Chateau (Ht.-Rhin)
MANUFACTURE D'IMPRESSION SCHEURER, LAUTH & CIE. Thann
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SOCIETE GENERALE DES FILATURES ET TISSAGES DE FLERS Flers
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VEREINIGTE WEBEREI SALZGITTER-STADTOLENDORF (Wm. Kübler) Stadtoldendorf
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HAMPTON MILLS, INC.....Easthampton, Mass.
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HIGHLAND PARK MANUFACTURING CO.....Charlotte, N. C.
INDIAN HEAD MILLS, INC.....Nashua, N. H.
JEFFERSON MILLS.....Jefferson, Ga.
KERR BLEACHING & FINISHING WORKS, INC.....Concord, N. C.
KING PHILIP FINISHING CO.....Lonsdale, R. I.
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LANE COTTON MILLS COMPANY (Div. M. Lowenstein & Sons).....New Orleans, La.
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THE MILLVILLE MANUFACTURING CO.....Millville, N. J.
MOORESVILLE MILLS.....Mooresville, N. C.
NATIONAL DYEING & FINISHING CORPORATION.....Culver City, Calif.
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NEWBURGH BLEACHERY.....Newburgh, N. Y.
NEW YORK MILLS DIV. (A. D. Juilliard).....New York Mills, N. Y.
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RENFREW BLEACHERY (The Abney Mills).....Travellers Rest, S. C.
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RIEGEL TEXTILE CORPORATION–Trion Division.....Trion, Ga.
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J. P. STEVENS & CO., INC.–Utica & Mohawk Cotton Mills Div.....Clemson, S. C.
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SWIFT MANUFACTURING COMPANY.....Columbus, Ga.
TEXAS TEXTILE MILLS.....McKinney, Texas
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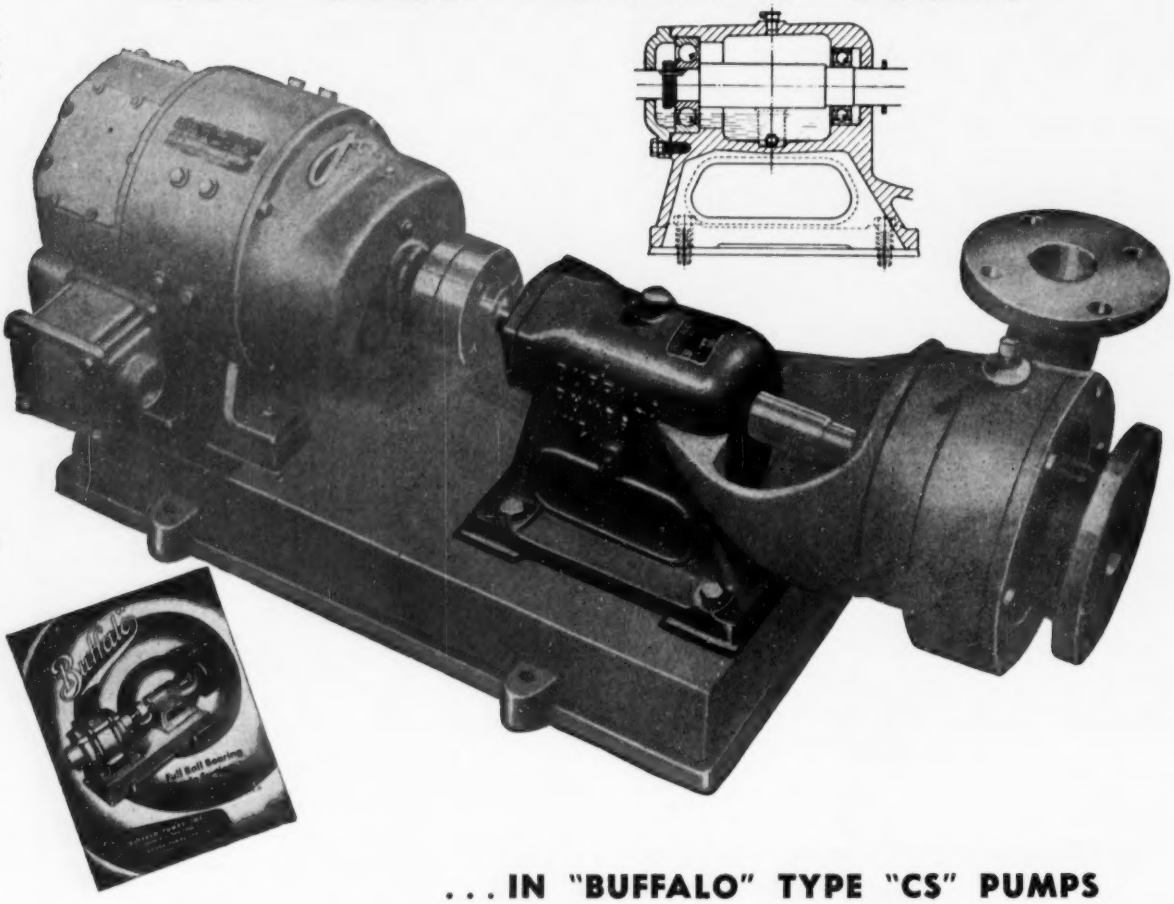
CUT YOUR PUMPING COSTS



. . . IN "BUFFALO" TYPE "CS" PUMPS

Oversize, durable bearings in a pump can save you money two ways. First, these bearings in the "Buffalo" Single Suction Pump above are capable of handling speeds up to 5,000 r.p.m., which is more than adequate for the most severe strains which constant operation can impose on the unit. This super-endurance saves you money where it counts — in pump repairs. Secondly, a pump capable of standing high speeds can be ordered in smaller sizes. And this means substantial savings in first cost. But the real savings in "Buffalo" Type CS Pumps are in PERFORMANCE . . . on your clear water job . . . on zone air conditioning service . . . on a wide variety of chemical liquids. WRITE FOR BULLETIN 976D for details on this lower cost pumping!

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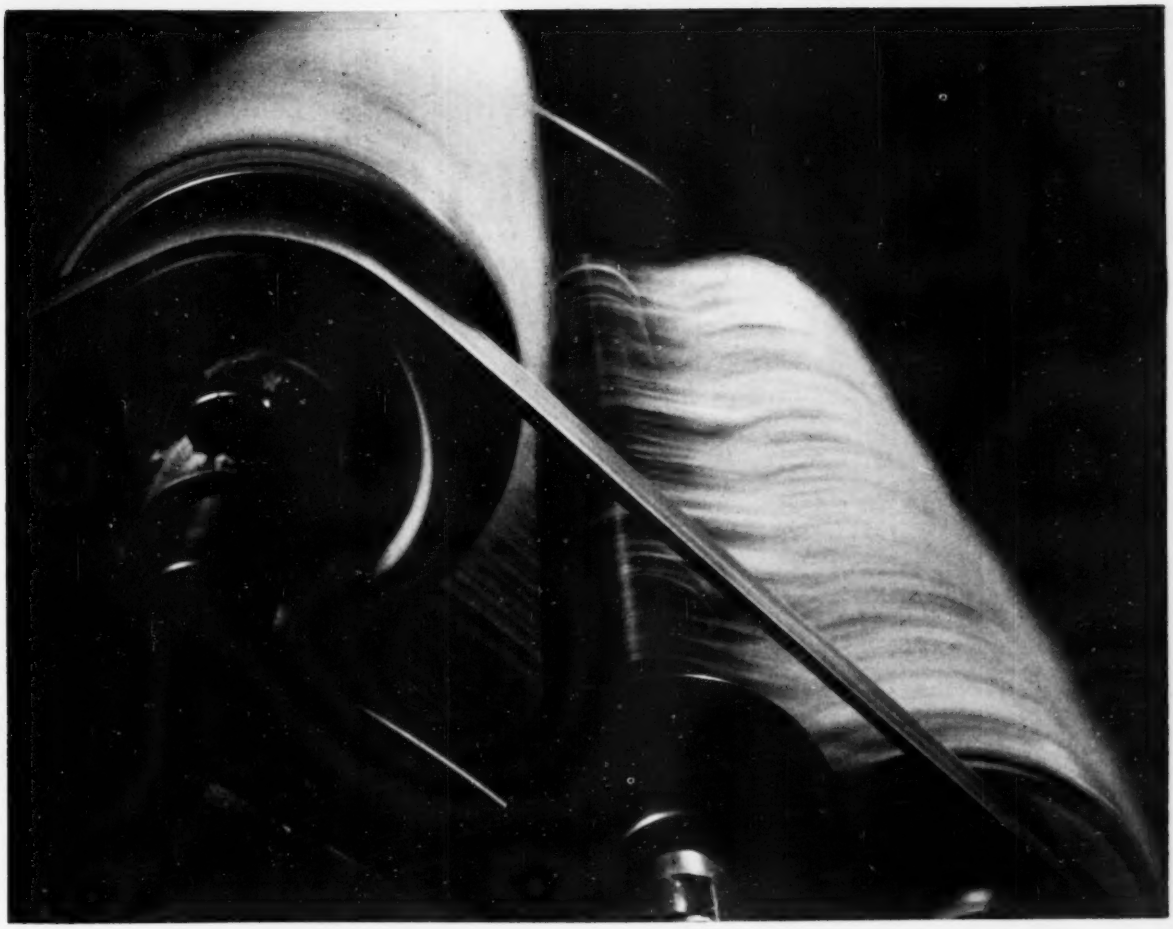

The Eyes of Taxes Are Upon You

PRESENT DAY TAXES and production costs, plus the competitive conditions existing in the textile industry today, make production *economies,* or *increased* production, almost essential . . . Correct lubrication can play a major part in *both!* The *exactly-right* lubricant for each machine will effect production economies by reducing power consumption, machinery wear (and subsequent replacements), and maintenance costs . . . On the increased production side, correct lubricants can be of vital assistance in enabling machinery to operate faster and longer, and reducing "downtime" by extending the time between scheduled overhauls . . . Your Standard Oil representative is qualified, by training and long experience, to assist you in the selection of *correct* lubricants. He knows a lot more about lubricants than just the selling of them. Why not call him in?

Standard Oil Company
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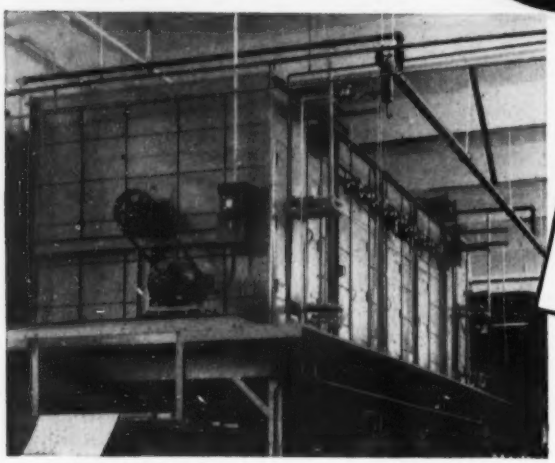
See A&G DRYING AND VENTILATING EQUIPMENT at American Textile Machinery Exhibition



VAPOR DRYER: We are showing a gas fired unit of our well known roll type dryer with all of the latest improvements.

ROOF FAN: We are showing one of our ventilating units that can be mounted on the roof and throw the heat and vapor up and away from supply inlets.

The Choice of Leading Mills

The two A & G units illustrated herewith will be shown at the American Textile Machinery Exhibition at Atlantic City, April 26 through 30 — booth 78 on the main floor and booths 840-842 and 849-851 on the second floor.

This equipment has consistently been the choice of leading mills because it is tried and proven. It has been continuously developed and perfected over a long period of years.

Be sure to visit us and learn about the important features of this and other A & G equipment.

ANDREWS and GOODRICH, Inc.
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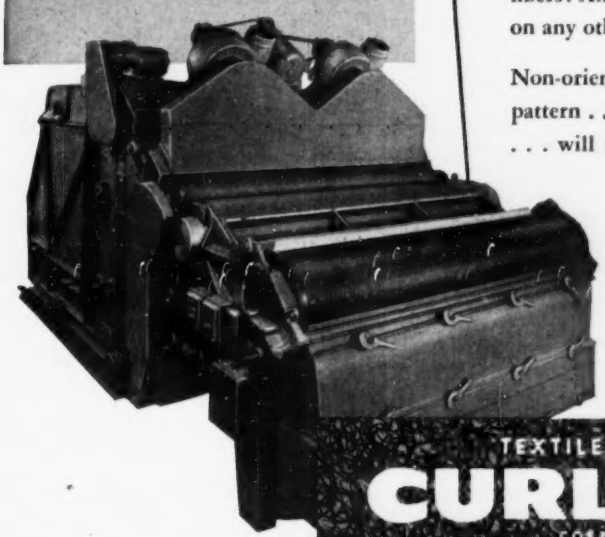
Many new and unusual products are being developed

Because of the unique way the Rando-Feeder and Rando-Webber economically form a *Random Web* from almost any type of waste or staple fiber, many new products are now being developed . . . products unheard of a few years ago. Imagine making a web from hair, glass, asbestos or cocoanut fibers! All of these materials cannot be handled successfully on any other equipment.

Non-oriented webs have no crosswise, vertical or horizontal pattern . . . have strength in all directions . . . are resilient . . . will resist delamination and splitting. Webs made by Rando-Feeder and Rando-Webber can be dry processed, needle punched, quilted, felted and heat sealed.

Send us samples of your fibers. We will make webs for test purposes. Write for details.

RANDO-FEEDERS and RANDO-WEBBERS
AVAILABLE IN 3 SIZES
Now you can make Random Webs 40", 60" or 84" wide . . . up to 2" thick.



SEE OUR EXHIBIT AT ATLANTIC CITY APRIL 26 - 30 BOOTH 812-813

TEXTILE DIVISION
CURLATOR
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Fortisan*. "strengthens" the trend to light weight fabrics

Celanese*

FORTISAN*—the super-strong rayon

Fortisan, just released by the government, brings to civilian apparel and home furnishings markets the same qualities that made it so much in demand by the Armed Forces for nearly eight years. These qualities are light weight, great tensile strength and exceptional dimensional stability.

One of the first results you see on this page; a fantastically light (the fabric only weighs 3.3 oz. per sq. yard) and *comfortable* sport shirt.

Using a Fortisan warp and acetate and rayon filling, this blend is the work of Celanese Fabric Development. It shows how Fortisan brings to exceptionally light fabrics the strength, performance and tailorability of far heavier cloths. It feels cool in the hottest weather. It absorbs perspiration yet doesn't get that wilted look. It washes to perfection, and keeps its shape through washing.

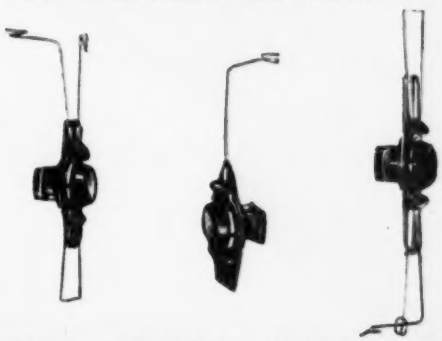
Could anyone expect more of a sportshirt, regardless of price? Celanese technical representatives will be glad to work with you in developing fabrics using the superb qualities of Fortisan to the greatest advantage.

Celanese Corporation of America, 180 Madison Avenue, New York 16. Boston, Mass. Camden, N. J. Celanese Drive, Charlotte, N. C. *Reg. U. S. Pat. Off.

How You Can Produce

HELANCA YARNS

AT PROFITABLE SPEED!



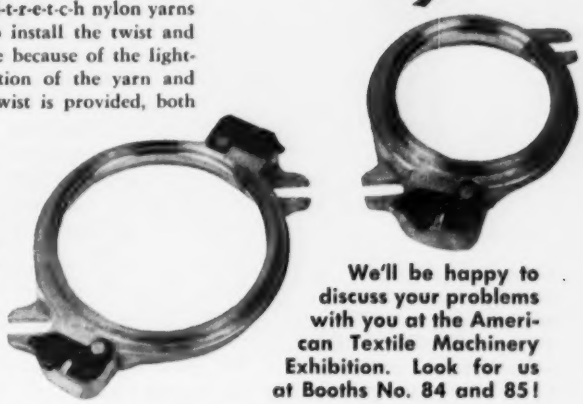
WITH SPECIAL HERR LIGHTWEIGHT FLYERS

Just as others are doing, you can make those famous HELANCA S-t-r-e-t-c-h nylon yarns at profitable speeds! Special Herr flyers have been designed to install the twist and special flyers to back the twist out. Increased speeds are possible because of the lightweight construction and nylon bearings which balance the action of the yarn and reduce the bearing contact on the spindle. Perfect control of twist is provided, both when installing and backing out.

WITH HERR CONICAL RINGS

Herr Conical Rings have controlled lubrication, which means clean yarn . . . ordinarily a difficult attainment when handling spongy yarns such as Helanca. Herr Conical Rings are also popular because they stop yarn breakage, permit heavier doffs and produce smoother yarn.

Herr Flyers and Conical Rings are indeed the ideal combination for producing Helanca and other stretch yarns profitably!



We'll be happy to discuss your problems with you at the American Textile Machinery Exhibition. Look for us at Booths No. 84 and 85!

Pease send us your literature.

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TEXTILE MACHINERY
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EXHIBITION

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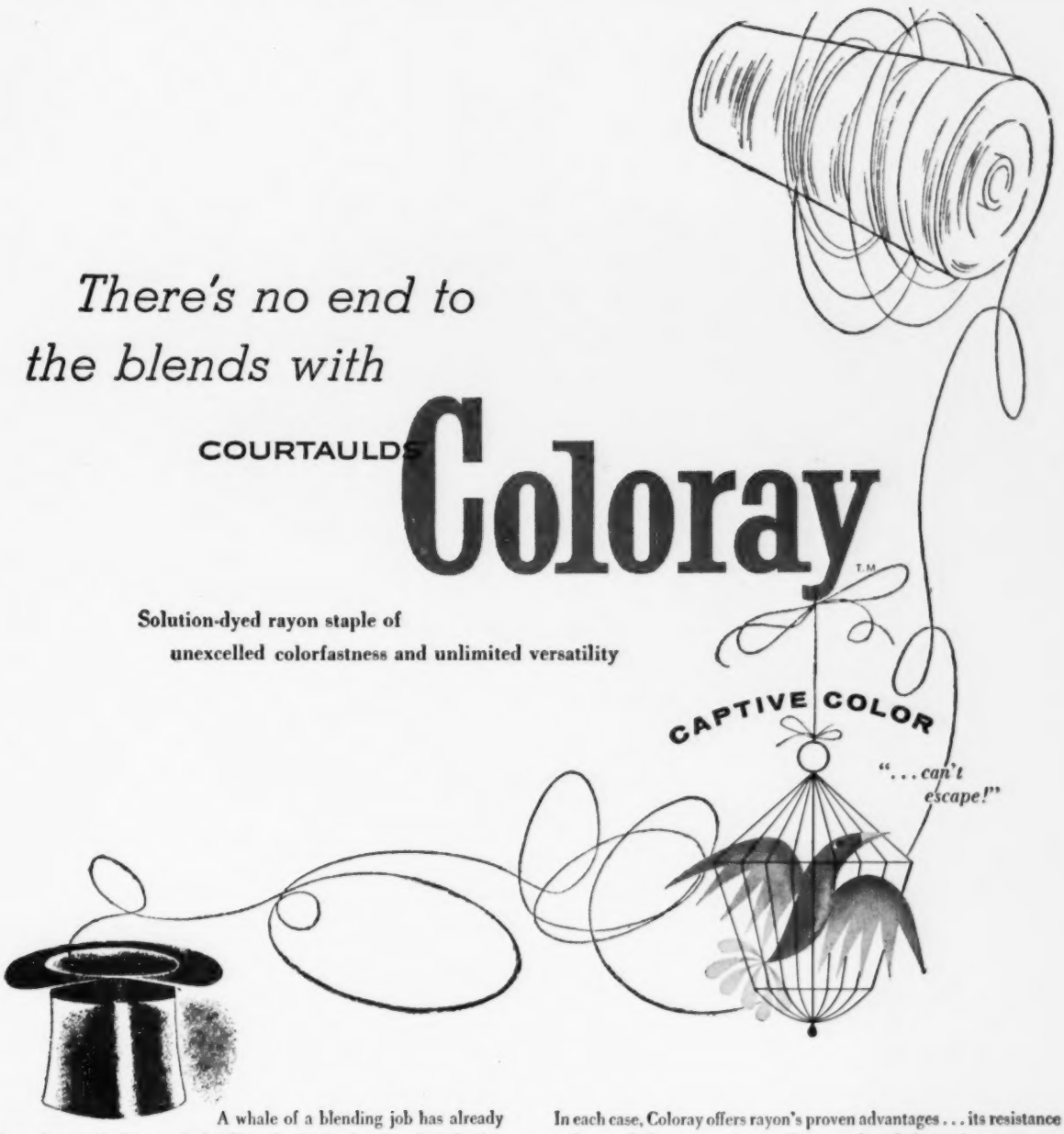


There's no end to the blends with

COURTAULDS **Coloray**™

Solution-dyed rayon staple of unexcelled colorfastness and unlimited versatility

A whale of a blending job has already been done with this wonderful fiber. In England—since '38. In this country—since '46. Over 2,000 colorfast colors already blended. And that's only the beginning.

You can do almost anything in color—starting with the basic range in Coloray. You can get more and more solid colors—delicate, dynamic or deep. You can get subtle near-solids and rich heather mixtures. Colored nubs. Irregular slub yarns—in multicolor! Not only color variety, but texture variety.

And still that's only the beginning! You can get marvelous new hybrids by blending Coloray with other fibers . . . cotton, wool, silk, acetate, nylon, the new synthetics like the polyesters and the acrylics.

In each case, Coloray offers rayon's proven advantages . . . its resistance to heat and abrasion . . . its tensile strength and absorptive power.

And Coloray offers a *low-cost* solution to tough dyeing problems. Dollar for dollar, it's less expensive than stock, yarn or piece dyeing. All in addition to Coloray's vital color advantages—amazing fastness, richness, uniformity; color remarkably unaffected by standard finishes; color that protects yarn quality.

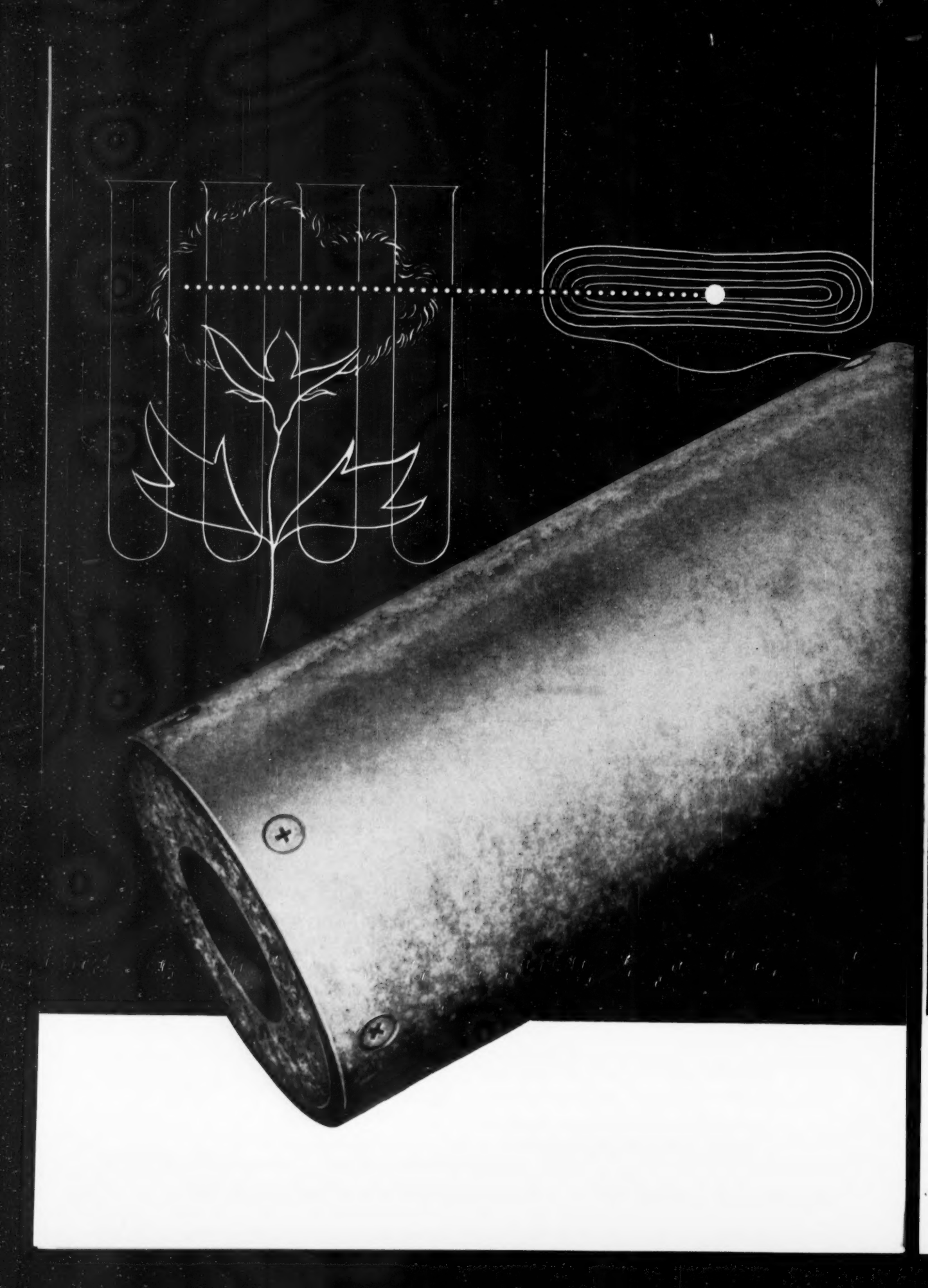
How can you use Coloray to your benefit? Ask Courtaulds, the company that developed the viscose process and originated solution-dyeing.

Coloray and white rayon staple are produced in Courtaulds' new plant at LeMoyne, Alabama. 13 basic colors are available in these deniers and staple lengths: 1½ *denier-*1 9/16″ *staple,* 3 *denier-*2″ *staple.*

For further information, write Fabric Development Dept.

COURTAULDS, INC., *first name in man-made fibers, first name in solution-dyeing*

600 FIFTH AVENUE, NEW YORK 20, N. Y. • GREENSBORO, N. C. • LE MOYNE, ALA.



Here's what micarta® is doing to boost textile production

LAMINATED PLASTICS

A leading textile mill wanted lighter, tougher lap rolls which would stay on the job longer. MICARTA® was the answer. Now the MICARTA lap rolls not only last months longer than the ordinary wooden rolls but their lighter weight permits up to three additional pounds of cotton to be wound on each roll. In addition, the MICARTA surface permits instant pick-up and wrinkle-free winding without the nuisance and expense of removing clinging bits of lap.

Here's what MICARTA can do for you

Light, tough, smooth-wearing MICARTA will pay off for you on products like spinning buckets, shuttles, bobbins, pirns, picker sticks and gears. On other textile applications, too, you can take advantage of its ability to withstand and "cushion" heavy vibration and shock . . . to reduce nerve-wracking noise. MICARTA means economy, less maintenance, more production.

Remember that Westinghouse-developed MICARTA is a thoroughly proved basic material. For the complete story on MICARTA call your nearest Westinghouse office or just fill out the coupon below. J-06542

YOU CAN BE SURE...IF IT'S Westinghouse

Westinghouse Electric Corporation • MICARTA Division, Trafford, Pa. • Attention: L. A. Pedley

micarta® is basic!

Sir: (Please check one)

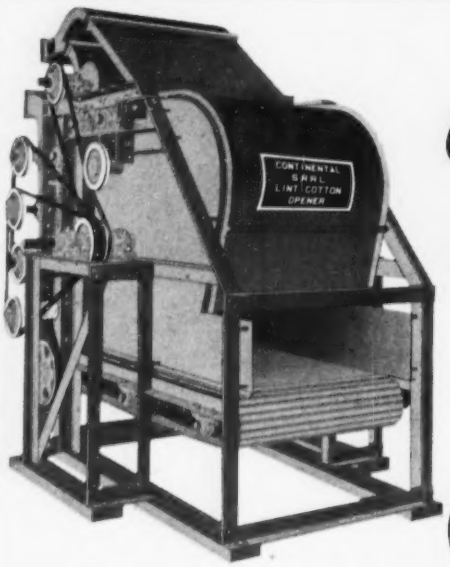
☐ Please have your representative call

☐ Please send me the complete facts on MICARTA

Name_____ Company_____

Address_____

City_____ Zone____ State_____

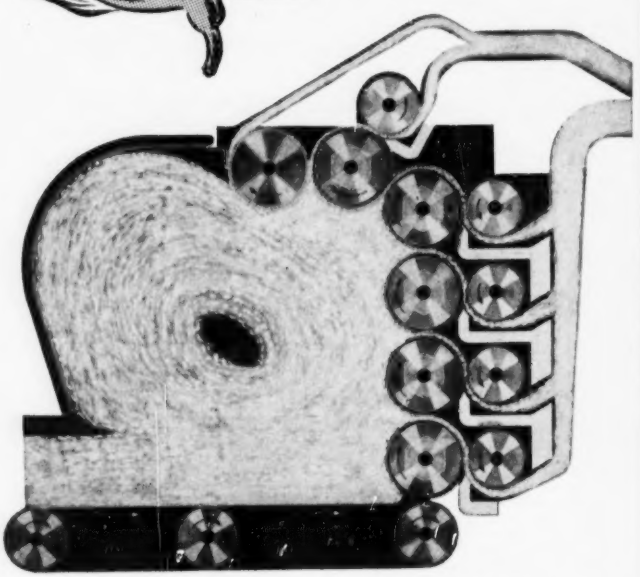


Continental's SRRL LINT COTTON OPENER

SAVES SPINNABLE FIBRE
PRODUCES BETTER YARNS
IMPROVES PROCESSING

This revolutionary new type cotton opening machine was developed by the Southern Regional Research Laboratory and first manufactured commercially by Continental. Its prime function is to open and fluff cotton. Laboratory tests and mill experience have shown it does this at high capacity without damage to the fibre. While designed primarily to facilitate cleaning machine-harvested cotton through better opening, it is an excellent blender. This makes it also valuable for high grade cotton. Initial cost and operation are both low.

We invite you to write for Bulletin 208 which gives complete description



SECTIONAL VIEW

Continental GIN COMPANY
BIRMINGHAM, ALABAMA
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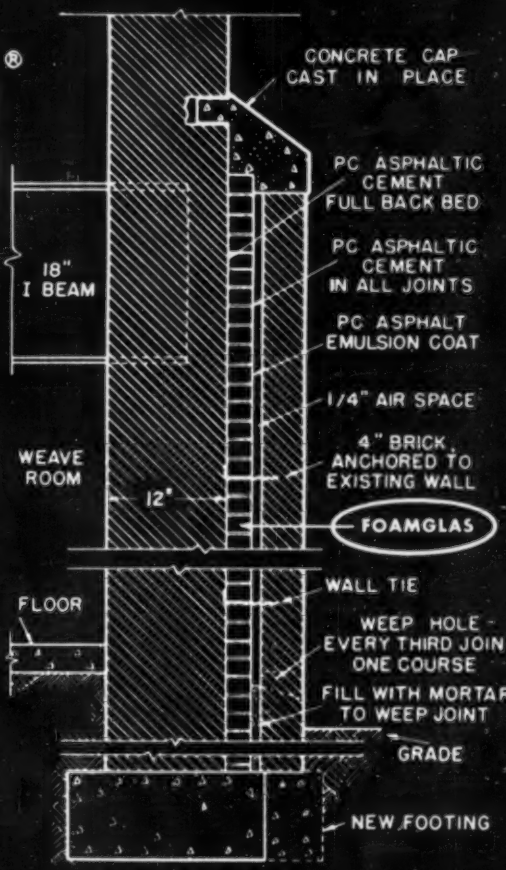
"FOAMGLAS® insulation stopped condensation without shutting down our weave room"



WALL SECTION

Consulting Engineer:
Hill & Hill, Welford, S.C.

M. Lowenstein & Sons' Vice President and Plant Superintendent, T. G. Roche, reports: "At our Limestone Mills, Gaffney, S.C., we benefited two ways from FOAMGLAS insulation. . . . It has eliminated permanently condensation on the weave room walls, enabling us to maintain constantly the required 80° temperature and 85% humidity. Also, we were able to install the rugged, waterproof blocks of FOAMGLAS outside the walls, avoiding a costly stoppage of the looms for weeks."

Let FOAMGLAS provide *you* with constant insulating efficiency coupled with long, trouble-free life. Use the coupon now for full information.

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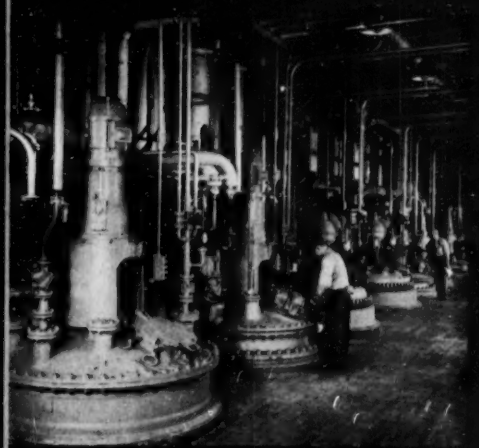
VAT DYES

For more than half a century Ciba has played a leading part in pioneering the development and manufacture of vat dyes derived from anthraquinone.

The benefits of scientific experience and achievement that emanate from the internationally-renowned research and manufacturing organization of Ciba were extended still further in the American market when the great, new vat dye plant at Toms River, New Jersey, was established.

At Toms River, Ciba is determined to bring further honor to the famous Cibanone name which will carry with it the assurance of high quality products accompanied by the most advanced technical services available anywhere. Thus will Ciba assist American dyers to achieve the results they seek to meet ever-increasing consumer demands for the highest fastness.



The name Cibanone is associated with vat dyes of the finest quality produced in Ciba's new plant at Toms River, New Jersey . . . the most modern and efficient installation of its kind.

Comparisons

MADE THEM WORLD FAMOUS!

See us at the
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Booth Nos. 365 to 367
374 to 376

PIN DOWN THESE SOUTHERN PIONEERING ACHIEVEMENTS AND COMPARE THEIR ADVANTAGES.

1. The revolutionary Magnum Tip design gives "the Southern tip a permanent grip".

2. Multiple laminated washers under the tip insures perfect blending of steel tip to shuttle body which is so essential in shuttles for synthetic weaving.

3. Exclusive Tempered Dogwood guarantees maximum shuttle life.

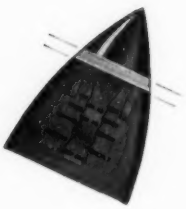
4. The two bolt grip construction that provides absolute vertical and horizontal stability.

5. The Permaligne hardened steel grip strap for strength and permanency of spring setting maintains a positive control of bobbin alignment.

6. The patented one piece scroll eye (108 series) is the fastest automatic threader and assures complete shedding of every filling loop around eye.

7. The application of patented lock nuts in shuttle construction and design.

8. The originators of Stehide the bonding material of Phenolic impregnated cloth laminate that gives longer shuttle life, greater and smoother wear, resistance to splitting, and minimizes wood defects.



THE LARGEST AND FINEST SINGLE UNIT SHUTTLE PLANT IN THE WORLD - - -

invites all Textile Mills to consider and compare these Southern advantages with others when ordering your shuttle requirements.

Choice of the best in raw materials.

Each step is quality controlled.

The finest in engineering and research facilities.

A plant capacity equal to any demands.

Consult your nearest Southern Shuttle Field Engineer for the information you require on all types of Southern Shuttles.

It's Southern for quality, service and delivery.

SOUTHERN SHUTTLES

A DIVISION OF **STEEL HEDDLE MFG. CO.**

PARIS, GREENVILLE, S. C.

Textile Industries
for March, 1954

News IN BRIEF

Proposal for Textile Specifications and Standards. At a general industry conference in the offices of the American Standards Association, technical men representing various phases of the textile industry voted to develop a nationwide minimum specifications and standards for the end-use of all textile fabrics used in wearing apparel and household furnishings. The conference voted to base the project on L22, American Standard Minimum Requirements for Rayon and Acetate Fabrics, published last April. Among the speakers who endorsed the project were: Frank Gorman, representing the American Federation of Labor; Robert L. Stutz of Better Fabrics Testing Bureau; J. Robert Bonnar of American Association of Textile Chemists and Colorists; and Genevieve Smith, representing the Mail Order Association of America. Watch for strong opposition to the proposal from industry groups and individual producers who consider such standards unworkable and detrimental to the best interests of the broad textile industry, and who feel that minimum requirements and standards in textiles are not needed at this time.

Unions Affect Wages? Question is raised by the Chamber of Commerce of the U. S. because it has an important bearing on whether there is any need to strengthen the hand of union leaders by relaxing the Taft-Hartley Act. In the last 20 years, a period of fabulous union growth, the share of the national income going to labor, while shifting a bit from year to year, has not changed perceptibly, the Chamber reports. In 1936, for example, compensation of employees was 66% of the national income. In 1952, the figure was almost the same; 66.3%. Yet during this period has been the Wagner Act, minimum wage laws, political promotion of unions, and a terrific amount of labor turmoil, strike, and threats of enmity, the Chamber reports.

Pressure to Do Better. The favorite pastime of one mill superintendent when an old-line American supplier calls on him is to show him the precision equipment and supply parts made by a comparatively recent newcomer in the machinery and supply business. The superintendent's hope: Someday the old-line companies will provide better made equipment and supplies, and give quicker delivery service on parts.

Inadequate Depreciation. American business is currently understating its consumption of capital by about $7 billion annually as the result of inadequate charges to depreciation accounts. This is the amount which must be set aside after taxes if American business

Now Mills Can Spin Metallic Yarn!

A metallic staple fiber has been developed so that cotton and worsted system spinners can now blend it with cotton, wool, and the synthetic fibers to produce yarns that give a subtle, random metallic effect which cannot be obtained by varying the weave with flat, filament type metallic yarn.

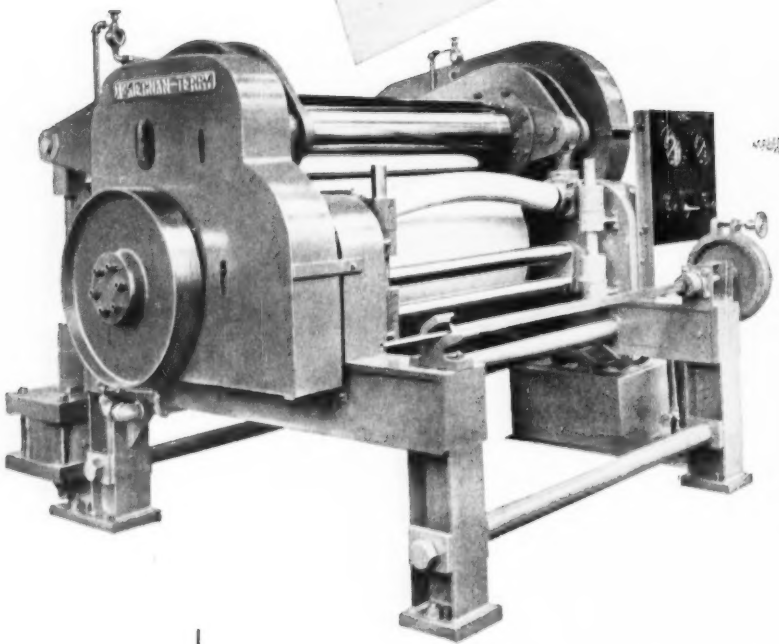
A product of Metlon Corp., the metallic staple has been used in quantities ranging from four to eight per cent of a blend to make yarns that are entirely satisfactory.

One of the principal advantages of the development is that of effect. It will also enable the weaver to incorporate metallic in many ranges of fabric where it has not been used before. Further, a metallic look can now be achieved on any loom. Previously, producers of volume fabrics of many types, not owning box looms, were limited to warp metallic effects. The spun metallic can be used as a single filling yarn with varying degrees of glitter, depending on the percentage of metallic staple in the blend.

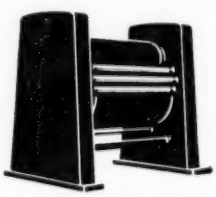
Looking at the new metallic staple are Arthur C. Brucks (right), president of Metlon Corp., and E. W. Dunham, Jr., New York City sales manager.

It is expected that the metallic staple will be widely used in men's and women's suitings, hosiery, gloves, mufflers, drapery, casement, and upholstery fabrics.

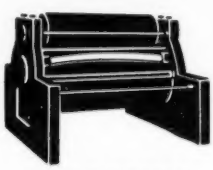
A SINGLE CALENDER FOR 3 SERVICES



FRICTION



SCHREINER



EMBOSSING

Designed Especially for Resin Finishes

Just change the rolls and gearing of this McKiernan-Terry Multi-purpose Calender, and you convert it from one service to another. You have your choice of Friction . . . Schreiner . . . Embossing, within a few hours . . . *a functional flexibility possessed by no other calender.*

With a battery of these machines, you can adapt *all* of them as necessary for your production needs . . . no machines need stand idle while work piles up for others, as in the case of non-convertible calenders.

And this convertibility is but one of the many *exclusive* advantages of the McKiernan-Terry Multi-purpose Calender. Its bottom-roll accessibility, its provision to maintain uniform pressure across roll faces, its high-temperature oil seals, its readily removable roll bearings with housings are some of the additional features that make this machine your best calender buy for highest quality production, lowest operating cost, and least maintenance expense.

Write for full information. MK609

McKIERNAN-TERRY CORPORATION • *Manufacturing Engineers* • Harrison, N. J.

McKIERNAN-TERRY Multi-purpose Calender

is to merely recover the value of fixed assets currently consumed in its operations. Because this amount of capital cost is excluded from expense accounts, business profits are being overstated in this amount annually, and these "paper profits" are then being subjected to income tax at the present high rates. These findings are documented in an extensive study of depreciation policy completed by the Machinery and Allied Products Institute.

Court Rule on Hosiery Mending Machine. The U. S. Court of Customs and Patent Appeals has reversed a lower court decision in ruling that imported hosiery mending machines are knitting machines. The Court sided with the Collector of Customs, who classified machines that Ameris Trading Co., New York, had brought in from Switzerland as knitting machines subject to an 27½ per cent ad valorem duty.

Atlantic City Show Reservations. Hotel reservation blanks for those planning to attend the American Textile Machinery Exhibition in Atlantic City next month may be secured from Albert C. Rau, Campbell - Fairbanks Associates, 322 Park Square Building, Boston, Mass. Reservations will not be honored except through Atlantic City's Convention Housing Bureau, 16 Central Pier, Atlantic City.

Commercial Production of Acrilan. The Chemstrand Corporation has announced that Acrilan acrylic fiber, with additional characteristics of easier dyeability and improved mill processing, has undergone satisfactory mill evaluation and is now ready for commercial production.

Japanese Competition. Look for increasing competition from Japanese textiles. Special Japanese commissions are working in all parts of the globe to see that Japan improves her export position. Some of the trades said to be offered cannot possibly be met by the American industry.

Castle Creek Revolutionizes Screen Printing with Use of Electronic Machine

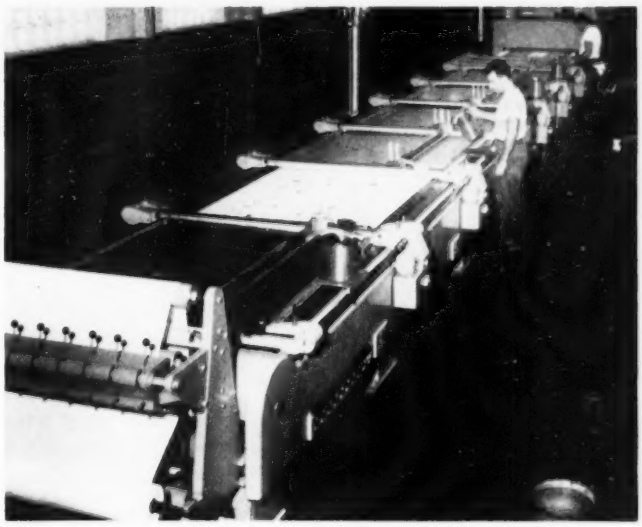
The use of electronics has now been applied to the screen printing of tablecloths, drapery and dress fabrics, and the first plant to adapt it for that purpose is Castle Creek Prints of New Jersey.

The new process, originated by Castle Creek, is a continuous production method which makes use of electronic methods to control both the patterns and the dyes used in the manufacture of screen printed materials. This replaces the hand work that was formerly used in these operations.

Frank Percarpio, president and owner of Castle Creek Prints, calls the machinery "the most revolutionary device yet developed for this work."

Proof of the importance of the new operation, he said, lies in the fact that "we are getting far more calls for business than we can handle. The new printing machine does the work faster and with more accuracy than could possibly be done by hand."

Mr. Percarpio expects to convert the entire plant to electronic operation. He also pointed out that, though it takes fewer men to operate the new equipment and turn out the equivalent amount of production, the demand is so great that it will not affect the number of men employed.



The machine, made in Switzerland by Buser Company from Mr. Percarpio's plans, is an automatic multi-color screen printing machine for textiles. It ensures the faultless printing of the most complicated designs. All fabrics, from the finest silks to the heaviest linens, are printed with the same neatness and precision. The most diverse and exacting demand, like eight-color printing, in the screen printing process are completely satisfied with this machine. It is a fully automatic process.

Change-over from one design to another is rapid, easy, and absolutely precise, for repeats ranging from 16 to 80 inches. Two men on this machine can do 250 to 450 yards per hour.

For more information on Castle Creek's operations, turn to page 136.

The Newest Link in SOLVAY'S nation-wide chain of Great Production Centers

Baton Rouge, La.

Detroit, Mich.

Moundsville, W. Va.

Syracuse, N. Y.

To Better Serve You with an additional source of supply, SOLVAY announces the start-up of its chlorine-caustic soda operations at the new Perkins Plant at Moundsville, W. Va.

Equipped with the Most Advanced Facilities in the industry—this new plant represents the last word in modern manufacturing equipment and efficient production methods. Very shortly this plant will also be producing Methyl Chloride, Chloroform, Methylene Chloride and Carbon Tetrachloride.

The Addition of this New Producing Center to the four points from which SOLVAY has been shipping carload quantities places SOLVAY in an even better position to give you quicker, more efficient deliveries.

Whatever Your Requirements—SOLVAY is ready to help you with problems involving the processing, handling or storage of SOLVAY products . . . assist you in the development of a new or improved process.

Your Needs and Problems are handled by SOLVAY's trained and experienced *local* field representatives operating out of SOLVAY's 13 branch offices. And whether you're a small or large manufacturer—you're always sure of receiving the close, personal attention that best fits your *individual* needs!

For Dependable Quality . . . Plus the Extra Services that help you meet today's keen competition—make your first call—SOLVAY!

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Allied Chemical & Dye Corporation
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Calcium Chloride • Sodium Bicarbonate • Ammonium Bicarbonate
Cleaning Compounds • Caustic Potash • Sodium Nitrite • Ammonium Chloride
Chlorine • Caustic Soda • Monochlorobenzene • Para-dichlorobenzene • Ortho-dichlorobenzene

News in Brief

Session of Congress Important to Textiles. Feeling among some mill men is that the present session of Congress, from the textile viewpoint, stands to be the most important ever held. Policies which will have effect on textiles and which will be considered by Congress are: farm, labor, renegotiation, and foreign trade. More and more textile executives are expressing their views directly to their Congressmen.

Canvas Goods Research Fellowship. An industry fellowship for research on cotton textiles has been established by the National Canvas Goods Manufacturers Association at USDA's Southern Regional Research Laboratory in New Orleans. The object of this cooperative venture is to improve cotton for outdoor use.

Commerce Department and Business. "Washington's new philosophy toward business is not that of giving businessmen as a group special favors and privileges.

"Rather the philosophy is simply recognition of the truism that business provides the goods and services which sustain the American standard of living and the American way of life and that these in turn maintain our sovereign strength against external threat of whatever kind.

"Wage earners, farmers, and businessmen all hang from the same bough—if the bough breaks, they all fall together. The new Administration is proceeding not on the narrow line that what is good for business is good for the country, but rather on the broad line that what is good for the country is good for business."—James C. Worthy, Assistant Secretary of Commerce.

Wool Promotion via Consumer Advertising. Wool promotion will be expanded through a national consumer advertising campaign. The campaign will be undertaken jointly by Wool, Inc., an organization set up recently by the Boston and Philadelphia wool trades, and The Wool Bureau, Inc.

Hamby on Man-Made Fibers. Dame S. Hamby of the School of Textiles at North Carolina State College will present a paper on "Recent Textile Machinery Developments and Trends Relating to Man-Made Fibers," at the International Congress of Man-Made Fibers in Paris, France, May 31-June 3.

Fiber Testing at Clemson. The Division of Technical Service of the American Cotton Manufacturers Institute has tentatively scheduled five courses in cotton fiber testing for 1954 at Clemson College. The first course ended February 26. The ACMI maintains a cotton testing laboratory at Clemson.

Textile Industry Activity Charts

which have been published here monthly since May, 1952, have been discontinued, at least temporarily, because of modifications and/or elimination of some of the reports that served as a basis for their preparation.

Du Pont Funds for Teaching. A fund of $238,500 for grants to universities and colleges to advance the teaching of science has been announced by the Du Pont Company. This new part of the company's program of aid to education is the result of an experimental plan announced last year.

New Auditorium at ITT. One of the South's famous builders of industry, the late Stuart W. Cramer, is honored by a memorial auditorium now under construction at the Institute of Textile Technology. By next spring I.T.T. officials expect the new building to be ready for use.

More Executives in Textiles. A recent survey of the cotton branch of the textile industry shows that the number of executives per 100 employees has increased 52% in the past 15 years, and the number of supervisors per 100 employees has increased 60% during the same period. In addition to this, the number of staff jobs, technicians, research workers, technologists, and others requiring college graduates has greatly increased. Because of this increasing demand and the shortage of graduates, it is becoming difficult to get trained men.

Who Damages Cotton? In the present controversy over gin-damaged cotton, about which the mills complain bitterly (see TI Feb. page 145), ginners reply that the mills with high speed machinery and antiquated processing methods do more damage to cotton than any type of equipment a gin may have or any methods a gin may employ. Spinners realize cotton undergoes certain damage in textile processing, but contend they don't need help from the ginner in damaging it further.

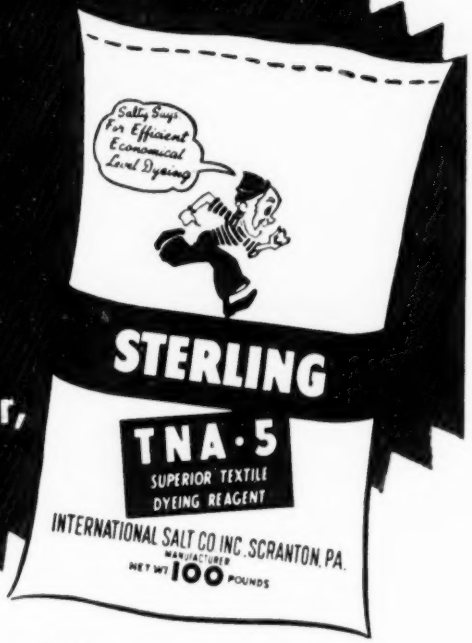
New F-F Knitter. Robert Reiner, Inc., has developed a four-section full-fashioned garment knitting machine. Carrier and spindle movements are fully automatic, and the machine is also equipped with an automatic V-collar attachment. Each head has four narrowing fingers, and up to six yarn carriers are provided. The machine has a 28-inch knitting width and a constant carrier lead.

Booklet on Textile Topics. J. W. Valentine Co., New York, selling agents for 16 southern textile mills, has broadcast over 8 mill-region stations Textile Topics, a series of 18 talks by experts. Subjects included the New York Cotton Exchange, Quality Control, Textile Standardization, Static Electricity in Textiles, Acrylic Fibers, Psychometrics and Textiles, and others. Now these talks are printed in pamphlet form and are available from the sponsor at 40 Worth St., New York 13.

6 ways better!

That's Why, in One Short Year, STERLING TNA·5

Superior Textile Dyeing Reagent Earned a Big, Industry-Wide O.K.



• A year ago TNA-5 was news! Today, it's newsworthy! For this dyeing reagent is superior in so many ways... so adaptable to all dyeing methods ... and for every type of fiber ... it needed only a trial to be enthusiastically adopted in most plants. If you haven't already tried it ... Sterling TNA-5 will quickly prove itself in these now-famous six ways:

O.K. Better Shades, Better Finishes. Eliminates dye precipitation, produces a good color yield, level shades and soft finish.

O.K. Efficient, Economical Replacement, pound for pound, for anhydrous sodium sulphate in a neutral dye bath.

O.K. Neutral, Readily Soluble in hot *or* cold water.

O.K. Cotton, Rayon, Wool—or any blend of these fibers, in the staple, yarn or piece goods, in a neutral dye bath.

O.K. Dry or Brine ... either way, in dry fine granular form or automatically converted to fully-saturated brine with the TNA-5 Dissolver.

O.K. With Direct and Naphthol Dyes ... especially effective ... produces excellent crock fastness and clear brilliant colors.

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AN EXECUTIVE *Views*

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

Farm Industry Progress

A NUMBER of comments have been made in this column and elsewhere in recent months concerning the overdrying and over-machining of cotton. This writer—as well as others—has pointed out that the only real solution to this situation lies in education, and to do some of the other things we have been trying to do is merely to treat the symptoms of the malady rather than the cause.

In the December 1953 issue of TEXTILE INDUSTRIES we tried to go into the background of this matter and explained that the very necessary and very much welcomed mechanization of cotton farming has brought with it a complexity of situations which have culminated at the door of the mill opening room. We have felt, and still feel, that a lack of understanding between the farmer, the ginner, and the manufacturer contributed largely to the current situation and that a better understanding had to be brought about between these groups.

At Last, Some Action. Perhaps the most ambitious effort yet made in what we consider to be the right direction was made recently at Clemson, South Carolina, and it is highly deserving of words of editorial comment. Briefly, the story is this:

Aware that as the production of cotton moved westward the farmer became farther and farther removed from the textile mill, the American Cotton Manufacturers Institute staged at Clemson a mill tour to which were invited leading farmers from the western cotton-producing states. This tour was held last month immediately following the meeting of the National Cotton Council and it attracted a sizeable number of the new 1954 model cotton farmers—the sort of men who supervise and control thousands of acres of irrigated and rain-grown cotton in a manner undreamed of on the small farms of North Carolina, South Carolina, Georgia, and Alabama.

These men, many of them accompanied by their wives, were brought from Atlanta to Clemson on a special car of the Southern Railway, and once they were quartered at the Clemson House Hotel a group of mill men took them through the paces of a carefully planned agenda. Growers who had never seen the inside of any sort of textile plant, and who had no slightest inkling that the word "lap" had any connection with the card room, saw cotton as it moved through the various stages of a modern Deering, Milliken mill.

Man-Made Fibers, Too. Not only did these western cotton men see cotton mills. They saw, too, the cleanliness and the high-speed efficiency of a modern plant operating on what we call synthetics and what you may call man-made fibers. They found out for themselves what others have been saying for sometime—that a mill man entrusted with the money of his stockholders will process whatever fiber or fibers he can sell for a profit. Just as the farmer may turn from cotton production to cattle-raising, so also may the mill man turn from cotton to synthetics.

In planned demonstrations, local mill managers showed the cotton producers some of the problems they encounter in trying to process the product of their fields. They showed them neps and nips, they talked about over-machining and overheating at the gins. They came away, most of these producers, with a new concept of the problems of the cotton manufacturer.

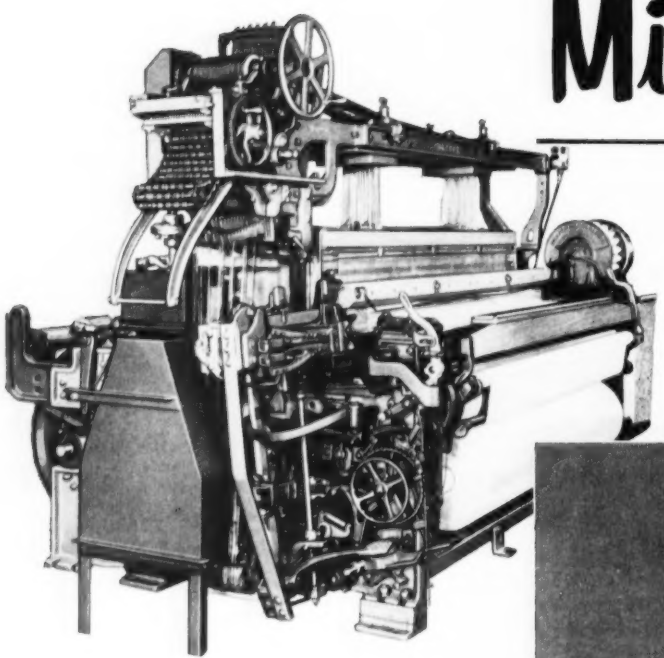
Not All Work. Apparently, enough of the social atmosphere was worked into the mill tour to produce a satisfactory environment for the ready exchange of ideas between producer and manufacturer. There were luncheons and dinners and parties and the people from the vast "cotton ranches" of the West were told that the American mill is the American farmer's best customer. They must have left Clemson with a new conception of the fact that whatever hurts the textile mills will inevitably hurt the cotton farmer. They must understand much better than ever before that unfavorable legislation and damaged or inferior raw materials could virtually spell an end to cotton manufacturing and cotton farming in America.

We may view with considerable pride the results of the mill tour planned by ACMI for western cotton producers and hope that it may become an annual feature.

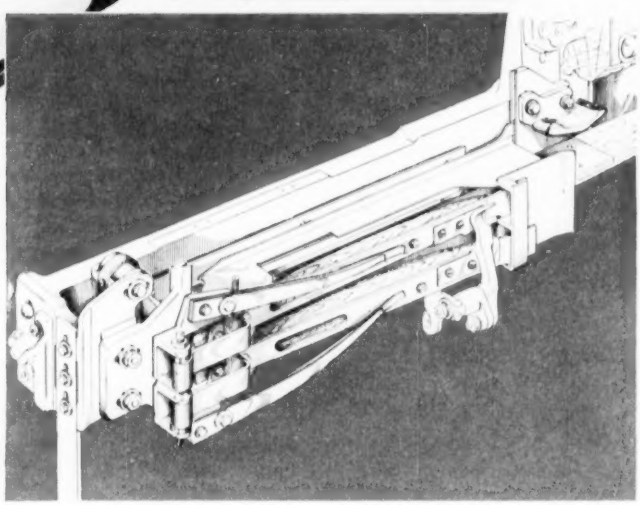
Foreign Trade Angles

The latest figures we have seen show that the United States has now dropped to fourth place in the world race for textile exports. At

Developments are proven by Mill Trial



XD with 2x1 BOX MOTION with the New PIVOTING BINDER



Every new development of Draper products requires thorough field trial before it is offered for mill use. The 2x1 Box Motion with the easy-to-adjust Pivoting Binder is an example.

Major developments, which have met rigid requirements will be seen at the Atlantic City Exhibition April 26-30. Don't miss this great show.

TEXTILE MACHINERY AMERICAN EXHIBITION ATLANTIC CITY APRIL 26-30 1954 ASSOCIATION

"Retaining Leadership through Research"

DRAPER CORPORATION

HOPEDALE, MASS.

ATLANTA, GA. GREENSBORO, N.C. SPARTANBURG, S.C.

THE WORLD'S LARGEST MANUFACTURER OF AUTOMATIC LOOMS

one time the leader of the pack, the U. S. now follows Japan, United Kingdom, and India in that order. Japan, in first place, appears headed for 1953 exports of some 800,000,000 square yards. By the time this appears in print the final figures should be available, but whatever the actual yardage may be, the United States is almost certain to be in fourth place.

Another little foreign trade "gimmick" in which you might be interested is the situation which has been developing around velveteen imports. There is a loophole in the law whereby velveteen which has been waterproofed gets in at a considerably lower tariff rate—into the United States, that is—than does velveteen which has not been waterproofed. The really smart foreign producers have been putting a quick and cheap waterproofing on the goods which has not been permanent in character, and which could be removed with relative ease. This temporary waterproofing gets velveteen by the customs at the considerably lower rate and thereby increases the profit for the foreign producer. A bill is being considered by the Congress which would close this loophole.

We are especially glad to be able to mention that Congress has taken official note of the velveteen situation because not often in these columns are we able to mention things Congress has done *for* the textile industry. Usually we are mentioning things that it has done *to* the textile industry.

Textile Industry Profits

The textile profits for the last year or two have been so bad that the story is going around that mill auditors are now wearing black arm bands. Be that as it may, we must report the sad fact that for the third quarter of 1953, these being the latest figures available, profits for the textile mill products industry averaged 2.5¢ per dollar of sales, after taxes. This is a far cry from 1941's 6.5 or the first quarter of 1947, which was 9.5. There is, however, a silver lining to every dark cloud and, although the 1953 figures do not look very good when compared with those of the post-war era, they show up better when seen alongside those for 1952 and part of 1951.

In 1951, for example, third quarter profits dropped to 1.6 and all that saved the year was a high of 5.1 in the first quarter and 4.2 in the second quarter. In 1952 things went from bad to worse with a low in the second quarter of 1.5. *(Continued on page 188)*

Mar. 17-19—Meeting of **Committee D-13 on Textile Materials, ASTM,** Statler Hotel, New York, N. Y.

Mar. 18-20—Annual meeting, **Alabama Cotton Manufacturers Association,** Hotel Buena Vista, Biloxi, Miss.

Mar. 24-April 1—125th national meeting, **American Chemical Society,** Municipal Auditorium, Kansas City, Mo.

April 2—Spring meeting of **Carolinas Section, American Society for Quality Control,** Clemson (S. C.) College.

April 2-3—National convention of **Delta Kappa Phi Fraternity,** N. C. State College School of Textiles, Raleigh, N. C.

April 5-8—American Management Association's **23rd National Packaging Exposition and Conference,** Convention Hall, Atlantic City, N. J.

April 7-10—Annual convention, **Cotton Manufacturers Association of Georgia,** Boca Raton (Fla.) Hotel and Club.

April 21-23—**Southern Industrial Wastes Conference,** Hotel Shamrock, Houston, Texas.

April 22-24—Annual convention, **American Cotton Manufacturers Institute,** Jung Hotel, New Orleans, La.

April 26-30—**American Textile Machinery Exhibition** (sponsored by **American Textile Machinery Association**), Atlantic City (N. J.) Auditorium.

April 26-30—**Industrial Health Conference,** Hotel Sherman, Chicago, Ill.

April 28—**Lowell Technological Institute Alumni Meeting,** Haddon Hall, Atlantic City, N. J.

May 3-4—17th **Hosiery Industry Conference** and 50th annual meeting of **National Association of Hosiery Manufacturers,** Claridge Hotel, Atlantic City, N. J.

May 5-6—Spring meeting of **The Fiber Society,** Institute of Textile Technology, Charlottesville, Va.

May 8—Spring meeting, **Textile Operating Executives of Georgia,** A. French Textile School, Georgia Institute of Technology, Atlanta, Ga., topics: carding and spinning.

May 19-20—100th Anniversary Celebration of **The National Association of Cotton Manufacturers,** Somerset Hotel, Boston, Mass.

May 27-29—Annual convention, **South Carolina Textile Manufacturers Association,** The Cloister, Sea Island, Ga.

June 10-12—Annual meeting, **Southern Textile Association,** Ocean Forest Hotel, Myrtle Beach, S. C.

June 11—53rd annual **Alumni Reunion of Philadelphia Textile Institute,** Manufacturers Golf and Country Club, Orcland, Pa.

June 13-18—Annual meeting, **ASTM** (11th Exhibit of Testing and Scientific Apparatus and Laboratory Supplies and 9th Technical Photographic Exhibit), Sherman and Morrison Hotels, Chicago, Ill.

Sept. 9-12—**Fourth Canadian Textile Seminar,** Queen's University, Kingston, Ontario, Canada.

Sept. 13-14—Fall meeting of **The Fiber Society,** McGill University, Montreal, Canada, with **The Textile Technical Federation of Canada** and **Canadian Association of Textile Colourists and Chemists** cooperating as hosts.

Sept. 15-16—National convention, **American Association of Textile Chemists and Colorists,** Biltmore Hotel, Atlanta, Ga.

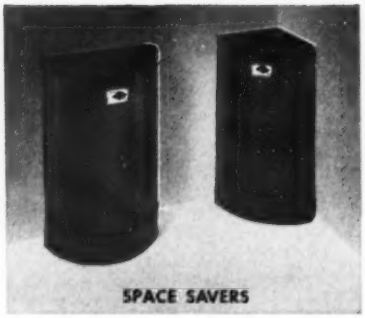
Oct. 4-9—18th **Southern Textile Exposition,** Textile Hall, Greenville, S. C.

Oct. 14-15—Annual meeting, **North Carolina Textile Manufacturers Association,** Carolina Hotel, Pinehurst, N. C.

Oct. 14-15—Annual convention, **The Quartermaster Association,** Sheraton Plaza, Boston, Mass.

Oct. 23—Fall meeting, **Textile Operating Executives of Georgia,** Georgia Institute of Technology (A. French Textile School), Atlanta, Ga., topics: slashing and weaving.

WASTE CANS

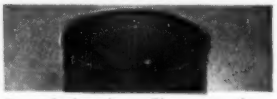


SPACE SAVERS

Light in weight, easy to handle, easy to keep clean. C-D-F builds waste barrels, with or without casters. Reinforced metal handles. Kick bands can be furnished in metal or fibre. A good way to improve mill housekeeping is with these new half and quarter round cans. They save floor space, fit snugly against walls and corners. Remember, C-D-F can supply special fibre receptacles in any quantity, with top quality construction.

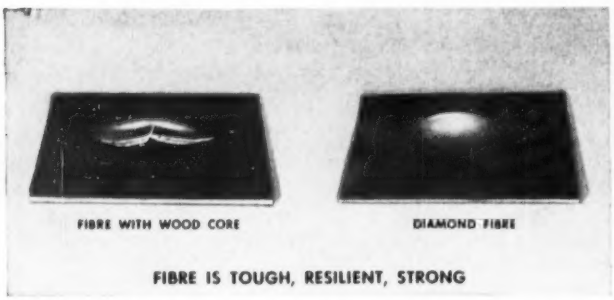
ROVING CANS

Running synthetics? A rolled fibre top rim eliminates static charge.



A variation is a fibre top rim, turned and reinforced with a heavy wire ring.

Nothing can be stronger, tougher, yet smoother than a C-D-F Roving Can! They stand up, stand out for years of reliable service. Smooth, seamless uniformity . . . from one sample can to a carload. Metal top rim is 16 gauge steel, rust resistant plated. Smooth and snugly fitted around can. Galvanized metal bottoms for longer life. Good stocks are at the C-D-F Spartanburg, S. C. plant.



FIBRE WITH WOOD CORE

DIAMOND FIBRE

FIBRE IS TOUGH, RESILIENT, STRONG

You will look a long time to get a material that can take impact better than old Diamond Vulcanized Fibre, the father of all plastics. Fibre is half the weight of aluminum . . . workers do not push or lift useless weight. It will not crack or shatter under heavy impacts. It is smooth surfaced and resists water, oil and grease.

SPARTAN TRUCKS

These C-D-F quality-built trucks last and last and last. Built to fit your dimensions, to fit the needs of your mill. Top rims have no overhang to snag elbows or materials. Centerband is curved to push away from spinning frame. No skimping on rivets. Smooth surfaces inside and out.

C-D-F builds and sells DIAMOND FIBRE RECEPTACLES

to move materials fast and safe...to last for years!

Looking for a big, reliable source of supply for your mill's requirements in roving cans, fibre trucks, barrels, waste cans? Think first of C-D-F, one of the world's largest manufacturers of quality vulcanized fibre with a separate division making a full line of fibre receptacles.

Here's the way C-D-F does business with you. From our receptacles catalog you get a good idea of the completeness of our products. Then you call the C-D-F sales office listed on the back cover.

C-D-F WORKS WITH YOU

A well-trained C-D-F sales engineer contacts you, works with your plant or maintenance engineer, studies your problem carefully. If you are in the market for Spartan Fibre Trucks, he checks the width of post alleys, the height of the ring rail and other limiting factors. He knows cotton . . . finds out the number and length of bobbins, the diameter of the spinning ring, how many bobbins must be doffed.

A BIG, RELIABLE SOURCE

Your order or problem is sent to C-D-F Bridgeport's Receptacles Division, where it is checked for the strongest, lowest cost method of construction. Quality hardware, the best in casters, all metal rust-resistant rims are used by C-D-F craftsmen. Deliveries are good.

C-D-F makes its own vulcanized fibre, so selection of uniform, top grade sheets is simple. We are sure of the source of supply . . . it's next door, inside the family.

Get started on the road to better receptacles buying. Call on C-D-F, write for that big catalog. For whatever you need to move or store materials fast, safe, economically, C-D-F can make for you, from genuine Diamond Vulcanized Fibre.

CDF *Continental-Diamond Fibre*

CONTINENTAL-DIAMOND FIBRE COMPANY

NEWARK 11, DELAWARE

NEW Equipment AND MATERIALS

Filling Mixing Unit for Warner & Swasey Loom

A filling mix unit, functioning as an integral part of the Warner & Swasey-Sulzer Weaving Machine, will blend alternate single strands of yarn at the rate of approximately 240 picks per minute.

The unit is available for all new installations of the loom and can be easily added to such machines now in operation in the field. [This development was reported in TI for October, 1953, page 141, left column.]

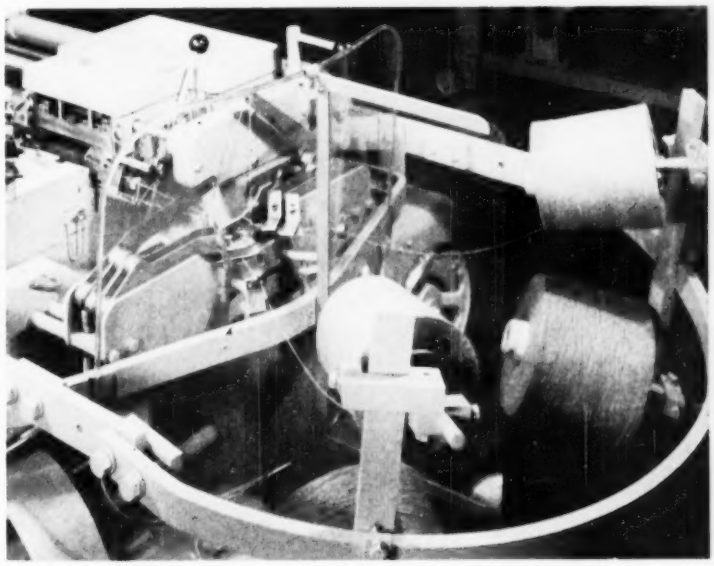
What has been accomplished in this new improvement is simply that the feeder which holds the yarn and feeds it to the active shuttle has been changed from a single to a double unit. Two feeder gripper springs are mounted on a single plate, one feeder gripper directly above the other. In addition to the normal horizontal motion of the feeder, vertical motion has been added, which brings first the top feeder into operating position and then the bottom feeder. This makes it possible to feed yarn from two packages into the weaving machine on an alternate, single strand, pick-and-pick basis.

Single strand blending eliminates filling bars. It also provides more flexibility and broader possibilities in blending of two colors, minimizes the effect of variations in yarns, variations in color, assures more uniform quality, and facilitates the use of color combinations.

As part of the new filling mix unit there is incorporated a pick-back attachment by which the harness motion and take-up motion can be reversed without moving any other part of the machine. If the yarn breaks, the operator merely presses a lever and the machine automatically moves back to where it was when the yarn broke. This saves operator time and eliminates possibilities of error.

Warner & Swasey Co., 5701 Carnegie Ave., Cleveland, Ohio.

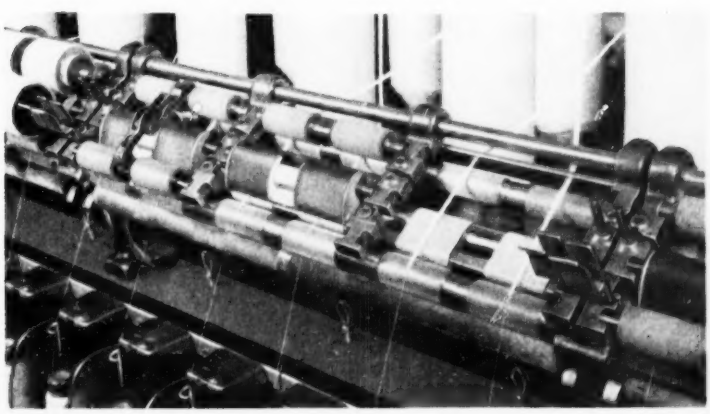
For additional data, request item C-104, using Handy Return Card on page 196.



Close-up photo showing the filling mix unit on the W&S loom.

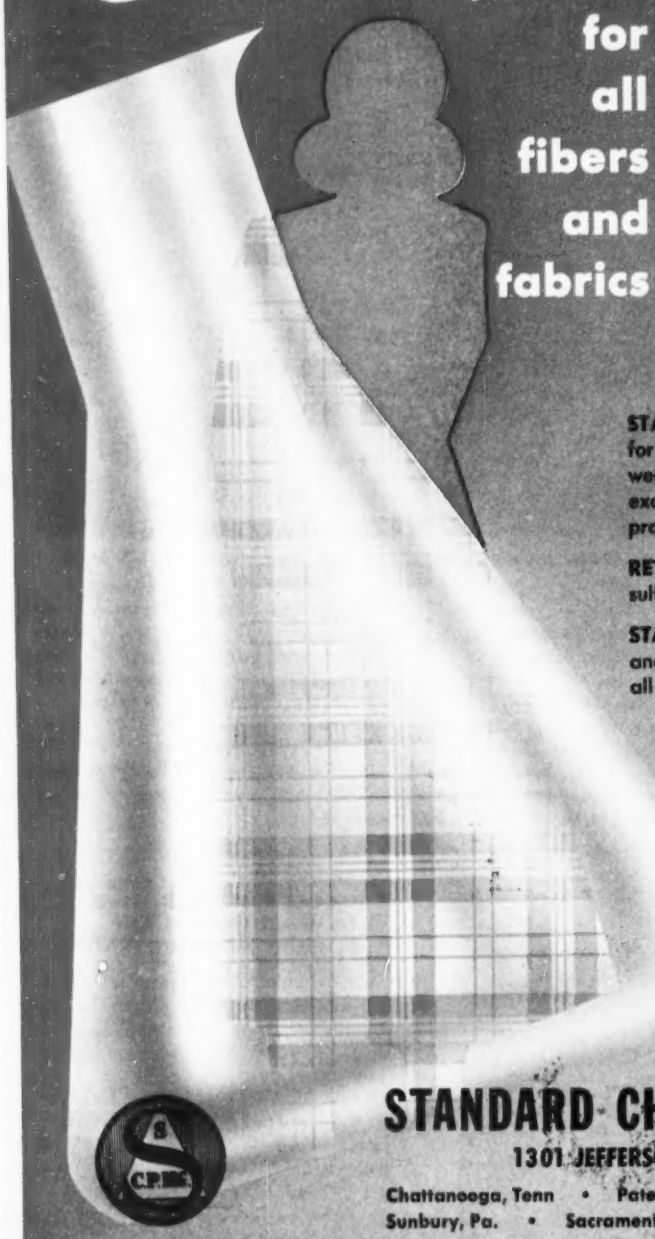
Convert Roth Drafting to Double-Belt for Higher Drafting Ability

Saco-Lowell Roth single-belt drafting systems can be converted to the double-belt type with the Duo-Roth drafting units now being produced. This new unit, which replaces the middle top roll and control roll used in the standard single-belt Roth system, increases drafting ability at least 50%. Higher yarn strength and



← **Duo-Roth drafting by Saco-Lowell.**

Standard's quality products



for all fibers and fabrics

PYROTEX — For scouring and dyeing Wool, Worsted, Cotton, Acetate, Rayon and Nylon. Neutral, effective under acid, alkaline and hard water conditions.

STANTEOSINE — Substantive softener for Acetate, Rayon, Cotton, Worsted, Wool. Minimum effect on shade and light fastness of dyed fabrics. Anti-static properties.

STANDAFINS* — Durable and semi-durable finishes imparting a full range of body, hand and drape to all fabrics; non-slip finishes; snag-resistant finish for hosiery; ribbon finish.

STANDAPOLS* — Quality sulfonated oils for finishing, softening, throwing, sizing and emulsifying; anti-static agents.

STANTEX* OILS FOR YARNS AND STAPLE — Suitable for all fibers in coning, winding, twisting, spinning, weaving, knitting, etc. Characterized by high lubricity, excellent stability and scourability and good anti-static properties.

RETARDINE* — For level dyeing and stripping of vat, sulfur and direct colors.

STANTEX* PENETRATORS — For fast, efficient wetting and surface reducing action in dyeing and finishing of all yarns and fabrics.

SANFOROLS — For efficient wetting and rewetting and softening properties in preshrinking processes. No gumming of shoes or odor development.

SOLIDINA — For improving fastness to washing and crocking of direct colors.

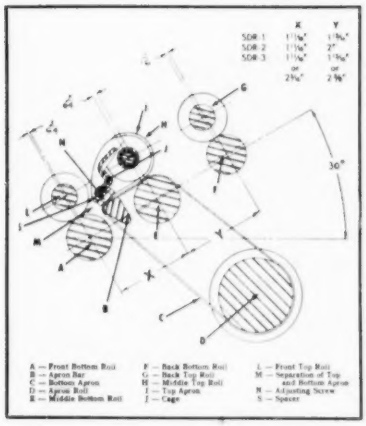
MOYTOL — Penetrant for dyeing, fulling, carbonizing, mercerizing, finishing and sizing. Effective in acid, alkaline and salt solutions.

*Reg. U. S. Pat. Off.

STANDARD CHEMICAL PRODUCTS, Inc.

1301 JEFFERSON STREET, HOBOKEN, NEW JERSEY

Chattanooga, Tenn • Paterson, N. J. • Providence, R. I. • Salisbury, N. C.
Sunbury, Pa. • Sacramento, Cal. • Greensboro, N. C. • Leaksville, N. C.



Cross section of Duo-Roth system.

evenness, flexibility, less cleaning, no cage wear, and easy application are other advantages.

Consisting of a new Torrington needle-bearing middle top roll, a new adjustable cage with necessary spacers, two synthetic top aprons, and two leather bottom aprons (all parts necessary to completely equip two spindles), the Duo-Roth changeover can be applied to practically all of the frames now equipped with the conventional Roth assembly, with a minimum of lost time.

The Duo-Roth control unit is readily accessible for cleaning and handles the entire range of long and short staple cotton fibers. A tight bottom apron is maintained. The long length of the bottom apron and its more open position keep it relatively clean and easy to clean.

It is recommended that, when installing the Duo-Roth changeover, new Shaw type draft gearing be applied to take advantage of the greater drafting capacity and to allow the use of a variable break draft.

Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

For additional data, request item C-102, using Handy Return Card on page 196.

NEW Equipment AND MATERIALS

flanges moving simultaneously.

(4) Positive locking — simplified design provides positive clamping of the two adjustable flanges, eliminating corrosion. Flanges are quickly and easily released for making speed changes.

(5) Higher efficiency—single wide belt gives maximum hp efficiency. Eliminates problem of maintaining matched belts and matched grooves for equal power distribution.

(6) Less shaft overhang.

(7) Single adjusting screw easily accessible at either end of sheave.

(8) No preventive maintenance required.

T. B. Wood's Sons Co., Chambersburg, Pa.

For additional data, request item C-502, using Handy Return Card on page 196.

Uniform Napping at Cloth Speeds Up to 40 ypm

Now available to mills in the United States is a napping machine recently announced by Franz Muller Maschinenfabrik at M. Gladbach, Germany, which has these features:

(1) Cloth speed up to 40 ypm—production up to three times more than that of conventional nappers;

(2) More uniform and better napping with the same number or fewer runs through the machine;

(3) Both raising energy for pile and counterpile and cloth speed are regulated by non-graduated controls and can be read from large dials;

(4) Electro-magnetic brake stops napper in minimum time;

(5) Cloth tension can be controlled with aid of handwheel and its amount read at instrument panel;

(6) Raising rolls are driven by circular-locked V-belts for effective pulling power;

(7) Gears are positively driven;

(8) Converting the operation from pile and counterpile to felting (semi-felting) action is achieved in a few moments without exchanging belts or pulleys.

(9) All rolls are ball bearing mounted.

Textile Machinery Import, 277 North Ave., New Rochelle, N. Y.

For additional data, request item C-501, using Handy Return Card on page 196.

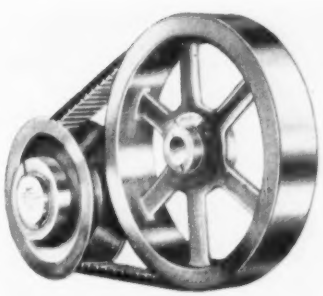
Variable Speed Drive Has Single Notched Belt

Features of a new single-belt variable speed drive for use with five to 20 hp motors on spinning frames, etc., where it is desirable to change the speed of a driven machine to the one best suited for a given operation or product, are:

(1) Wide speed range — up to 3 to 1 ratio.

(2) Notched belt construction gives higher horsepower capacity for single belt drive.

(3) Single-groove, stationary-control, variable-pitch sheave with both



Wood's variable speed drive.

Integral hp motor by A. O. Smith.

For Economical Changeover to New NEMA Motor Standards

A new line of integral horsepower motors is designed specifically to provide smooth, economical changeover to the new standards prescribed by the National Electrical Manufacturers Association.

The manufacturer will conform to the 1954 standards established by NEMA, but at the same time will offer users the new motors in either the present or in new mountings. This promises to be a matter of considerable saving to the customer, who during the transition period can avoid the cost of remodeling machines and can liquidate inventories of belts, pulleys, and accessories without loss.

Initial production will be in the

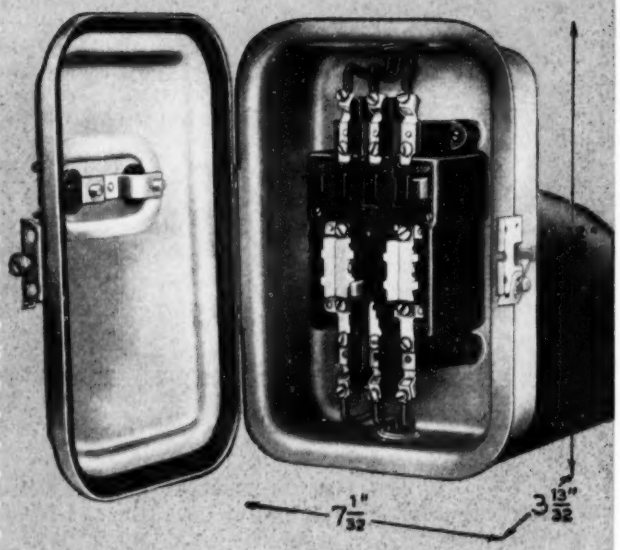
ALL NEW

and designed *specifically* for the

TEXTILE INDUSTRY

THE ARROW-HART TYPE "LM"

LOOM SWITCH



SIZE 0 — 3 POLE — 2 HP To 600 VOLTS A-C

Here for the first time is a manual, across-the-line Starting Switch designed and built *specifically* for the Textile Industry. Completely new and radically different throughout, the Arrow-Hart Type "LM" employs a distinctive, built-for-the-purpose switch mechanism housed in a specially engineered, lint proof enclosure . . . it is *NOT* just an adaptation of a standard switch with a "face lifting." As a result the Type "LM" assures new standards of performance, dependability and safety on single or multiple spindle looms.

Outstanding Features..

- UNIQUE ROTARY TYPE MECHANISM RESISTS SHOCK . . . far in excess of any found in actual installations.
- LINT PROOF ENCLOSURE . . . with efficient, balloon type neoprene impression gasket. No knockouts or mounting holes to admit lint. Self-locking latches hold cover tightly even though screws aren't tightened.
- MUCH SMALLER SIZE, GREATER COMPACTNESS . . . saving valuable space.
- FULLY ENCLOSED MECHANISM . . . for extra safety, double protection against lint.
- PUSH BUTTON OPERATION . . . the *preferred* control throughout industry. Buttons are lint proof, electrically insulated.
- STRAIGHT-THRU WIRING . . . is faster, easier to install, no need for looping or U-bending.
- SAFER RE-SET MECHANISM . . . with lever *inside* lockable enclosure restricts re-starting to qualified personnel. Mechanical interlock prevents re-setting unless the Switch is "Off."
- SWITCH EASILY REMOVED FROM ENCLOSURE . . . without disturbing wiring. All wiring is brought to terminal blocks; switch is secured to these by 6 screws.
- UNDERWRITERS' APPROVED FOR SINGLE AND GROUP FUSED INSTALLATIONS!

SEND FOR COMPLETE INFORMATION . . . write for your copy of the new A-H Loom Switch Folder.

ON DISPLAY at the AMERICAN TEXTILE MACHINERY EXHIBITION Atlantic City, N.J. — April 26 thru May 1, 1954 Booths Nos. 868-869

INDUSTRIAL CONTROL DIVISION

The ARROW-HART & HEGEMAN ELECTRIC Co.

103 HAWTHORN STREET, HARTFORD 6, CONN.

Please send me my new Loom Switch Folder.

NAME _____

CO. NAME _____

POSITION _____

ADDRESS _____

CITY _____ ZONE ____ STATE ____

A Complete Line of ADVANCED DESIGN Motor Controls for the Textile Industry.

one, one and one-half, and two horsepower ratings. All performance characteristics of the old and new motor lines will be equal. Contour lines and styling will be the same. Only the physical mounting dimensions will vary according to the customers' wishes.

The new design is composed of rolled steel main frame construction with attached malleable iron base mounting as required. End frames are of durable cast iron. They are so constructed as to insure maximum ventilation to working interior parts, yet they meet requirements of "drip proof application."

A. O. Smith Corp., Tipp City, Ohio.

For additional data, request item C-503, using Handy Return Card on page 196.

Only .25% Waste Through Carding with New Machinery for Synthetics

The new Platt blending line and single roller card for processing rayon or synthetic fibers from 1 7/16" to 4½" staple length in deniers 1½ up, will blend to an accuracy of 0.7% with a total waste loss of approximately 0.25%.

Briefly it consists of the following:

A new lattice opener breaks down the baled material without fiber damage. A battery of these openers enables different types of fibers to be delivered to the blending machine.

A new blending machine is fed by four lattice openers and delivers the blend constituents in very accurate proportions for treatment by the intensive picker which performs the final opening and blending and produces a uniform lap of undamaged fibers.

The single roller card operates efficiently with the minimum amount of processing. There is no doffer comb on this machine so that fibers are not delivered in a criss-cross manner, depending upon the subsequent drawing frame for re-parallelization.

Atkinson, Haserick & Co., 211 Congress St., Boston 6, Mass.

For additional data, request item C-110, using Handy Return Card on page 196.

Heavy-Duty Towing Tractor

A heavy-duty towing tractor with a maximum draw bar pull of 7500 pounds, designed for general purpose industrial applications, is known as the Clarktor-75. It is equipped with an 82-hp Chrysler 6A engine with fluid coupling, planetary type drive axle, four-wheel brakes, complete tire interchangeability, one-piece hinged hood and full front fenders and running boards as standard equipment.

Features such as exceptional steering ease, ease of entrance and exit, and attractive appearance, and easy accessibility for service and maintenance have been incorporated in the new model.

Clark Equipment Co., Battle Creek, Mich.

For additional data, request item C-107, using Handy Return Card on page 196.

The Clarktor-75 towing unit.

Warning System Prevents Overloading Magnetic Tramp Iron Separator

The perfection of a completely automatic alarm system which enhances the efficiency and usefulness of magnetic separators for tramp iron removal by virtually eliminating the possibility of human error has been announced.

Called Magnalarm, the control does its "thinking" by means of a sensitive ferrometer which constantly measures the quantity of tramp iron as it accumulates on the magnet's surface, and which reacts on a circuit to trip the alarm as soon as a predetermined accumulation is reached.

Standard types of alarms — lights, bells, buzzers, etc. — are optional, as is also the location of the alarm, which may be at the machine itself, or in a remote office, or both.

By automatically alerting maintenance men when the magnetic separators need cleaning, Magnalarm insures that these magnetic units will always be working at optimum efficiency. Furthermore, unless the alarm sounds, the operator knows that no inspection is required; production can continue without interruption.

Eriez Manufacturing Co., Erie, Pa.

For additional data, request item C-504, using Handy Return Card on page 196.

Casein Staple Fiber for Use in Blends

Merinova, the animal protein staple fiber produced in Italy by Snia Viscosa, is available to mills in the United States in 3, 5, 9, 18, 20, and 27 deniers, in lengths from ¾" to 14".

Obtained from textile casein, the staple is naturally creamy white in color and is also produced in 20 spun-

(Continued on page 211)

RESILIENCY . . . is an important part of a needle's ability to withstand long service and knit consistently fine fabrics. The degree of resiliency found in Textile Needles is not too much, not too little; it is the product of a special steel formula and a special tempering process.

And to insure uniformity, all manufacturing steps are automatically and electronically controlled. In spring-beard or latch needles, Textile's care and control in manufacture make possible the uniform resiliency and the perfect combination of many qualities required by needles to knit finer fabrics at lower unit cost.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile

SPRING-BEARD NEEDLES

Arrow LATCH NEEDLES

Four full-fashioned tips show how

Charlie Saves Money!

By Charles Rhyne

EXCLUSIVE

IT IS WORTHWHILE to unwrap all nylon yarn and permit the pirns or cones to stand in the room where the yarn is to be knitted for at least 24 hours before it is used. By so doing this gives the yarn a chance to become accustomed to regular room temperature and humidity, and in the long run there will be less trouble encountered in knitting, especially in the number of press-offs ordinarily expected.

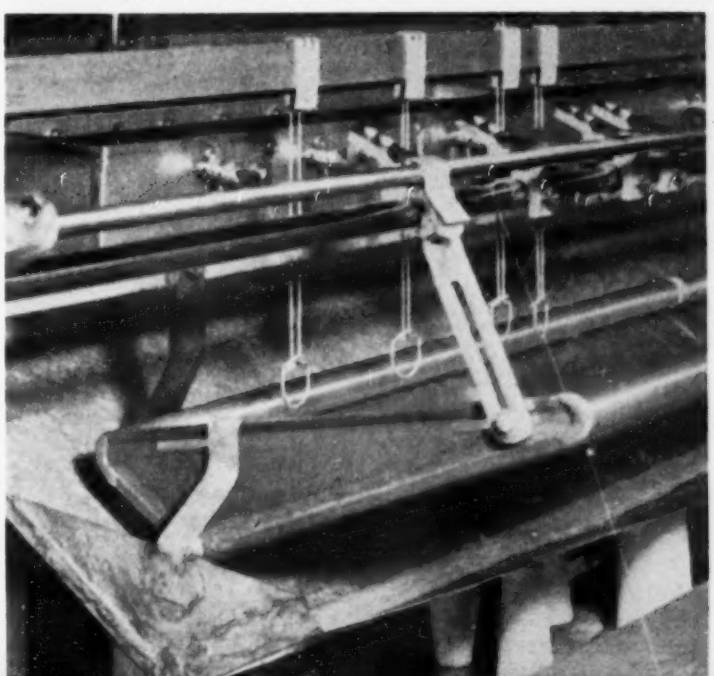
Bear in mind that all yarn is either wrapped in cellophane or waxed paper which prevents the yarn from absorbing any moisture. Although many mills are air conditioned, the yarn storage room usually is not air conditioned and under these circumstances the yarn is used before conditioning.

All opened 15 denier yarn should be wrapped during an extended shutdown. If this is not done, the yarn may become too damp, despite the fact that the plant is air conditioned. Many of us blame the yarn upon starting up with a large number of press-offs after a week-end shutdown. Take extreme care of the yarn and the ultimate results will be more gratifying. It's worth trying.

Tension Rings. Approximately four years ago we received the first samples of a new type tension ring and eyelet for our full-fashioned machines. Prior to this, the parts mentioned had to be replaced periodically because the yarn invariably cut an unwanted groove in the ring or eyelet which caused press-offs. At the present time we are still using those same

PIRNS should stand for at least 24 hours in the room where the yarn is to be knitted.

TENSION RINGS now used are extremely hard and have shown no wear after four years of service.



Don't Overlook Your Employees for

There is a vast reservoir of ability, knowledge, and experience that should not be overlooked when it comes to solving safety problems. One of the best sources for practical safety ideas is your own foremen and your own operatives. Their knowledge and experience make them specially fitted to give some good ideas on how to cope with some specific hazard affecting their jobs.

Have you been giving sufficient consideration to the views of your foremen and operatives on safety problems? How can operatives be expected to enthusiastically accept your recommendations that personal protective equipment be worn, or safety devices utilized? How can foremen be expected to enforce safety rules when their practical knowledge and experience is ignored? Aren't the operatives the ones that usually get hurt when an accident occurs? Aren't the foremen the key men in your safety program? Aren't the foremen responsible for meeting production schedules safely? Don't you honestly believe that foremen and workers have some good ideas to offer on how to best safeguard themselves and their jobs?

It isn't necessary for a person to be a trained engineer or a chemist in order to have some practical ideas of safeguards. Your foremen and operatives live with their jobs at least eight hours of every day. They are familiar with the eccentricities of the process and the equipment.

I am sure all of us have had experience trying to sell an operative on using a safety device or doing a job in the safe way. One approach is usually to point out the pain to be endured as the result of the injury and the financial loss to his family. What happens when our backs are turned; how many times does the operative start doing the job the old way, the unsafe way?

There are probably a number of reasons why the operative did not accept the safe way of doing the job. One reason may have been lack of training or inadequate training. Another reason could be that since it was his job he felt slighted because his ideas on how to safeguard himself and his fellow employees were not considered at all. Psychologists say that when a person is given the opportunity to express his thoughts on things that concern him, he will more readily accept changes in procedure or equipment. Even though it may not be his own idea that is

Extract of paper "Ideas Stop Accidents," by Henry Johnson, safety engineer, Celanese Corp. of America, New York City, presented before the 41st National Safety Congress.

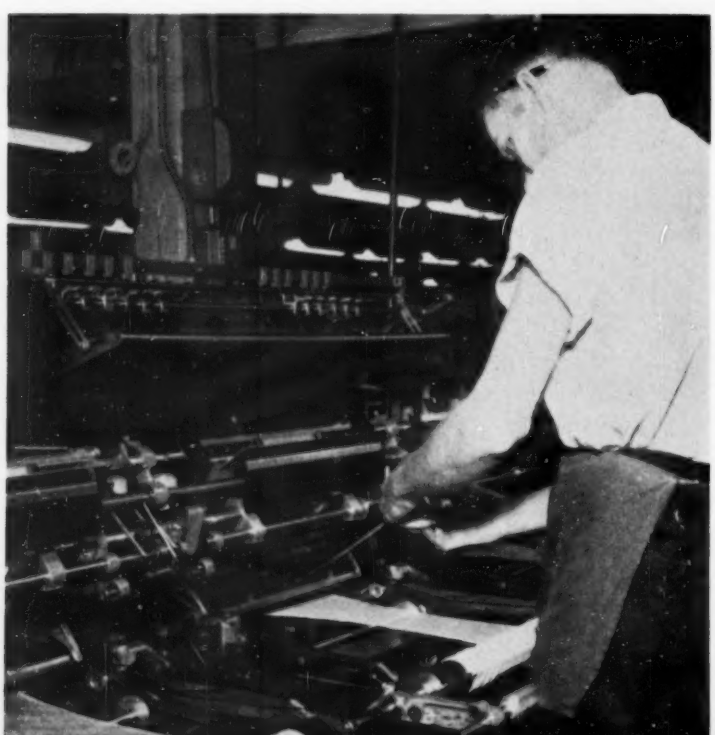
samples, and close inspection will show they are as good as new. The samples were supplied by American Lava Corp.

All of our machines are now equipped with these rings and eyelets, and it appears that further purchase of these items may not be necessary because of their long life. They cost slightly more than the conventional rings or eyelets.

The rings are extremely hard and brittle; therefore, caution should be exercised when installing them in their proper places.

Lubrication. We have heard of two mills where petrolatum is mixed with needle oil, heated to melt, and then sprayed into the sinker heads. The oil eventually works out but a certain amount of the petrolatum adheres to the side of the sinker slot tricks. It is claimed that this goes a long way in preventing the sinker head from wearing and assures free movement of the sinkers and dividers. Might be something to it for it does sound reasonable.

One very important "must" is the fact that all nylon size remover should be followed by needle oil squirted into the back of the sinker head. This should be done no later than ten or fifteen



← **SIZE REMOVER** should be followed by needle oil squirted into the back of the sinker head.

Good, Practical Safety Ideas

adopted, he is pleased that at least someone paid attention to his thoughts on the subject.

If there is some question on this point, just consider your own reaction. How do you feel when some rule or procedure is forced on you even though it may be for your own well-being? Not too good do you? Let's reword this question, "How do you feel if your opinion is asked on something that directly concerns you?" Pretty good, don't you? Even though you may have no particular thoughts on the subject, at least management considered you a reasonable person, and considered your thoughts worth hearing. As a consequence then, if a change is made, you are usually willing to do your best to go make the change work.

How about the foremen and operatives? They have good ideas. Certainly they are not anxious to be hurt, or to cause a fire, or to see one of their buddies or employees hurt. But, since they are directly involved, they feel that they should be given a chance to offer their ideas.

Celanese believes the operative should have a chance to express his ideas. We do this by means of a suggestion system. If the operative's idea is adopted, he is paid for it. Briefly this system works as follows:

1.. Numbered suggestion blanks are placed throughout a plant with a locked box to hold the individual suggestion along side. These are collected at least once a week. A docket is made of all suggestions received and sent to each department head in the plant.

2. Weekly meetings are held by these department heads and the suggestions considered. Those adopted are paid for as recommended by this committee.

3. Lists of adopted suggestions are sent to the other company plants having similar process and product. If they also adopt the suggestion, they will make an additional award to the suggestor.

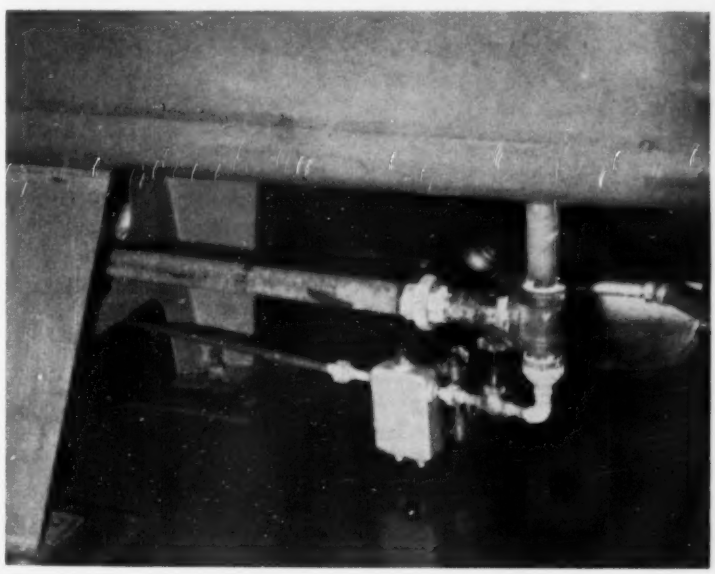
We have received some very good suggestions which have helped us improve the safe working conditions in our plants. Our operatives like the system and so does management. It provides a channel for the operative to communicate with management and enables management to learn of peculiarities of machinery, process and/or procedure which, if allowed to continue, could result in injury to employees or damaged property. The system is another means of obtaining teamwork which we all know is so important to the success of any safety program.

minutes after the remover has been applied. The reason for this procedure is to prevent undue wear of the sinker head.

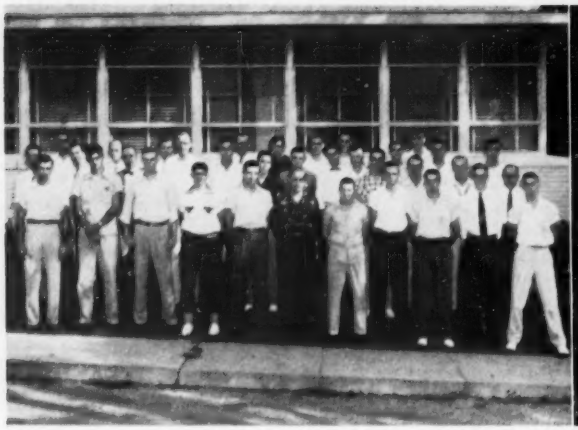
The instructions given with several size remover liquids emphasize the need to apply oil after using the remover. Operators should be impressed by the importance of rigidly following instructions at all times. When the heads are worn out is too late for talk.

Water in Steam Pipes. If colored heels have a tendency to puff after preboarding, it is likely that the steam contains too much water. The farther the preboarding machines are from the boiler, the more likely this condition is to prevail.

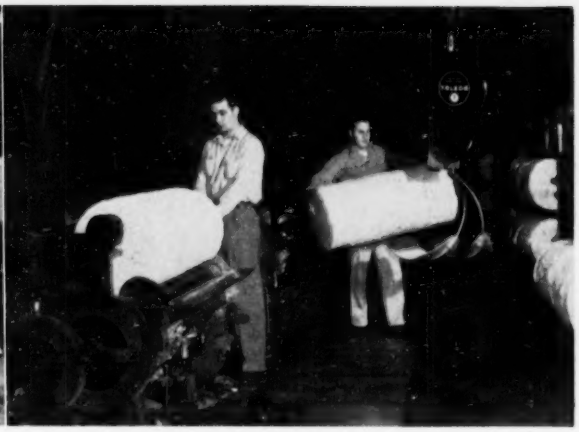
Double trapping the steam line helps, but the best results may be obtained by leaving the hose in the drum to heat and dry after the steam has been exhausted. Where several preboarding machines are in operation, one should be certain that the pipe coming out of the boiler is as large or larger than the pipe which leads to the machines. If the arrangement is otherwise and several machines draw steam at the same time, the water will also be extracted from the boiler along with the steam. Under such conditions, double trapping will not eliminate the desired amount of water from the steam.



DOUBLE TRAPPING the steam line helps to remove excess water at the preboarding machines.



1 These boys (shown with management men)



2 . . . . work in the mill

Training Tomorrow's

EXCLUSIVE

TODAY'S textile management men, from the first to the top level, must have higher leadership qualifications than those of yesterday. Tomorrow's demands are likely to be even greater. The advent of new fibers, fabrics, machines and methods brings about the need for different and more scientific approaches to technological and personnel problems.

With these facts in mind the West Point Manufacturing Company has launched a two-year cooperative training program for helping to develop tomorrow's leaders. In it there is a blending of the theoretical and the practical — formal college education and planned work-training experiences in the mill. The scheduling of mill work experiences is carried out as carefully as is the scheduling of college classes.

A three-man committee has been working since last spring on the program, formulating plans and procedures, and prescribing studies. According to M. Earl Heard, Vice-President and Director of Research, "Every mill has the problem of developing enough supervisory candidates to fill the ever increasing need for more and better leadership. Many are selected and placed in supervisory positions with but little or no preparation for handling the many problems that go with the job. Some develop sufficient problem solving ability within time; some, never; others become discouraged and return to their former non-supervisory work.

"The principal purpose of this program is to find and develop good men, capable of meeting and solving the day-to-day supervisory problems."

Still Need 4-Year Graduates. "We are not in any way diminishing our interest in four-year textile school graduates; we are trying to fill a need that has not been filled by trade or technical schools," said Mr. Heard.

The three-man committee established a two-year co-operative course at Alabama Polytechnic Institute, Auburn, Alabama. All courses are already in the catalog, and the trainees will receive college credit. Each trainee will spend one term in the plant and one in school. Half the students are to work in the mill while the other half attend school. Each term at A.P.I. consists of 12 weeks. Officials at A.P.I. cooperated closely with West Point in establishing the curriculum and in handling the details.

In the plant, the trainee will not be on a productive job but will follow a training schedule in which well-defined questions will have to be answered, and individual reports will have to be written about each 12 weeks of work in the plant. Each trainee will be routed through departments of the whole company: cotton department, standards, quality control, cost, insurance, personnel, as well as manufacturing, testing, and research.

Scholarships Basis. For each quarter term at A.P.I. the trainee is given a scholarship of $250.00 plus $5.00 per week transportation allowance for 12 weeks or $310.00 total. He may live in the valley and commute, or stay in Auburn as he so chooses. When the student starts to school each quarter he is given $125.00. The remaining $125.00

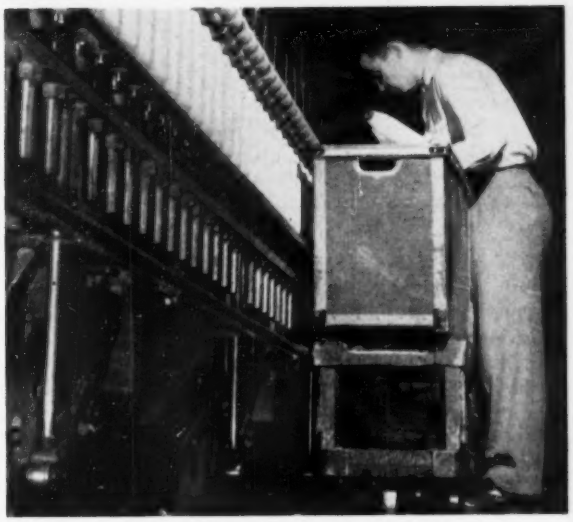
3 . . . . go to college

4 . . . . where program is checked

Leaders

West Point's program blends formal education and mill training

Staff Prepared



5 . . . . later work in another department

plus $60.00 transportation allowance are divided into 12 equal checks. The student calls by the mill office each week for his check so that the superintendent or some designated person may keep in touch with him during the time he is in school.

These scholarships will account for considerable annual expenditure in tuition, transportation, mill training wages, and other expenses. The program therefore must be selective and exacting.

Success Factors. Success of the program is dependent upon four primary factors: (1) Selection of the boys. (This was done as carefully as possible with the assistance of the Student Guidance Center at Auburn.) (2) Effectiveness of mill

6 . . . . go back to college

7 . . . . then pursue management career in the mill.

SPECIAL CURRICULUM IN TEXTILE MANAGEMENT AT ALABAMA POLYTECHNIC INSTITUTE

FIRST QUARTER		SECOND QUARTER	
Military Training	1	Military Training	1
Physical Training	1	Physical Training	1
English Composition	5	English Composition	5
Fiber Processing	5	Yarn Manufacture	5
Advanced Algebra	5	Physical Testing	2
Textile Fibers	2	General Physics	5
Wood Working Shop	1	Sheet Metal Shop or Machine Shop	1
TOTAL	20	TOTAL	20

THIRD QUARTER		FOURTH QUARTER	
Military Training	1	Military Training	1
Physical Training	1	Physical Training	1
Weaving and Design	5	Weaving and Design	5
Industrial Management	5	Production Control	5
Warp Preparation	5	Principles of Economics	5
Public Speaking	3	Textile Management	3
TOTAL	20	TOTAL	20

FIFTH QUARTER		SIXTH QUARTER	
Military Training	1	Military Training	1
Physical Training	1	Physical Training	1
Yarn Manufacture	5	Textile Costing	5
Safety Engineering*	5	Synthetic Fibers*	5
Labor Problems*	5	Psychology of Training & Supervising Ind. Personnel*	3
Fabrics*	3	Personnel Management*	5
TOTAL	20	TOTAL	20

*Other courses may be substituted. Substitutes include Chemistry, and Standards and Quality Control courses.

training. (How well each trainee is taught and checked on while he is in the plant.) (3) Effectiveness of college training. (Content and method.) (4) Placement and performance of trainees after course completion. (Dependent on how well they are sold on the West Point Manufacturing Company.)

Why School Training? Management expects the college courses to teach the elements of textiles as well as how to get along with people — theory of the industry, and human relations.

Why Mill Training? Management expects mill training to condition the trainees to production, policies, rules, regulations, variables, limitations, and to production operatives.

Management executives will meet with the mill trainees occasionally to explain management duties. For example, after a trainee has spent some time in the opening and picking department, the director of research will call a meeting and tell the trainees how the research division views opening and picking. After the explanation, an open forum discussion is held. This procedure is followed for the various segments in the mill organization.

How the Program Works

Selection of Prospective Students. The training committee concluded that the most practical procedure for selecting trainees would be by the mill superintendent with the aid of his department heads and staff men.

In selecting the students, the superintendents use the following procedure:

Preference:

(1) High school graduates working in mill.

(2) High school graduates who are sons of employees.

(3) High school graduates who are close relatives of employees.

(4) High school graduates of the three valley high schools but who have no relatives in the mills.

(5) Other high school graduates.

Applications:

(1) Preliminary applications on regular company blanks for those not employed in the mill. (Suggest personnel department interview, take application, and give superintendent an evaluation.)

(2) Bring applications up to date on those applicants who are at present employed in mill. (Personnel department should make a copy and evaluation.)

(3) Dead line on applications_____

(date)

WEST POINT MANUFACTURING COMPANY
TEXTILE CO-OP PROGRAM

SUPERINTENDENT'S RATING SHEET

APPLICANT _____ MILL _____

		SCORE	RATING
I	Results of Tests:		
	1. Ohio State Psychological		
	2. English & Physical Science Aptitude		
	3. Strong Preference Record		
II	General School Work		
	1. English		
	2. Math		
	3. Science		
	4. Overall average		
III	Past Work Performance		
	1. Production		
	2. Cooperation with fellow workers		
	3. Cooperation with supervisors		
	4. Advancement on job		
IV	Background Information		
	1. Kind of family member		
	2. Activities (church, scouts, etc.)		
	3. Use of leisure time		
V	Indications of Applicant's Success in This program		
	1. Attitude toward textile industry		
	2. Stickability (carry through)		
	3. College timber		
	4. Supervisory potentiality		
	TOTAL		
	NO. ITEMS		
	AVERAGE RATING		

NOTE: (1) Suggest superintendents rate each applicant on each item. Applicants with no work experience will, of course, not be rated on past work performance.
(2) Rate items 1 to 10; 10 being highest, 1, the lowest.
(3) Average rating equals total divided by number of items rated.

High School Records:

(1) Transcripts of high school records for those being considered to be obtained from high school so that superintendent can consider them in screening out those who are not likely to make the grade at Auburn.

Testing:

(1) Group testing and structural interviewing. This testing and interviewing will include not only a measure of academic aptitude but also a prediction of mechanical aptitude and other job success factors.

Final Selections:

(1) The superintendent makes final selections based on results of interview, high school record, work experience, tests, and other considerations.

A.P.I. Applications:

(1) Candidates selected by superintendent to fill out college application in duplicate. One copy retained for mill files and the other one sent to Auburn as application for admission. Transcript of high school records to be in duplicate with one copy for mill files and one copy mailed directly by the school principal to Auburn.

Superintendents Rate Prospective Students. A form was compiled to enable the superintendents to rate each prospective student on individual factors as well as on an overall basis. Boxed at the bottom of opposite page are factors considered in rating each individual. The student guidance service at Auburn is utilized to provide interviews and comprehensive tests which are of great value in determining aptitude. These tests and interviews require about eight hours.

Students Are Checked Closely. The head of the textile school at A.P.I. submits a report on each student every four weeks to inform the committee of the progress and standing of the student. Regulations have been formulated regarding scholastic deficiencies and remedial courses to make up such deficiencies.

Students are instructed to ask for help if difficulties arise. This procedure enables the committee to render a maximum amount of help and guidance where it is needed.

No One Surfactant Gives Maximum Efficiency on All Wet Processes

It is no longer considered good policy to simplify the choice of surface active agents by merely selecting one chemical type and using it for all surface active functions involved throughout the mill. Bleachers, dyers, and finishers are interested in obtaining the highest efficiency from the chemicals required in their processing, and they desire to maintain a good competitive position in the various desizing, scouring, boil-off, dyeing, and finishing operations. It is only possible to achieve this effect when the selection made for each specific operation is the best available at the time.

Specific selections of surfactants for certain textile operations can be typified by the following examples:

Kier Boiling of Cotton. A surfactant able to impart better bottoming of cotton goods must possess high detergency, good stability to alkali at the boil, excellent emulsification, with good rinsibility and good carrying properties of the soil from the fabric during the rinsing. It, furthermore, must avoid channeling, and supply good wetting during saturation of the fabric through the caustic soda solution. Pine oil is often a standard component of kier boiling assistants and supplies the required wetting and penetrating properties. Synthetic detergents of the fatty alcohol sulfate type have the necessary emulsifying detergent properties and, furthermore, good lubrication of the fiber to eliminate wrinkling. Non-ionic surfactants possess high emulsification of the cotton waxes and impurities, good detergency, with quick rinsibility at low temperatures. They lack the high lubricating effect of the fatty alcohol sulfates.

Bleaching. In peroxide bleaching, stability to alkali and peroxide with a minimum effect on the catalytic decomposition of the latter become the main qualifications. It is, furthermore, advantageous that the product act as a good detergent so that during the subsequent rinsing operation the impurities can be removed. This is of particular value in continuous peroxide bleaching. For all peroxide bleaching fatty alcohol sulfates rank high, and the same applies for chlorine bleaching.

Continuous Mercerizing of Cotton Yarns. Improved cleaning of the yarn can be obtained by adding a non-ionic detergent to the boil-off in order to maintain good emulsification of the cotton waxes, pectic substances, and other impurities. The detergent for this purpose must answer the following requirements:

Stability to NaOH at 5 - 10° TW and 212 F; low foam; high detergency; quick rinsibility from the yarn to avoid carryover to the mercerizing bath with subsequent accumulation in the rinse—accumulation of surfactant causes foam and loss of recovery efficiency during distillation.

The more highly solubilized non-ionics were specifically designed for kier boiling and possess the above necessary attributes also in regards to rinsibility and foaming. Few detergents have excellent detergency and solubility under the strong alkaline conditions required, and no other type has the ready rinsibility at low temperatures.

Yarns scoured with the addition of non-ionic ethers have greater cleanliness and increased luster after mercerizing. The scouring liquors maintain excellent dispersibility and more impurities are removed during the rinse.

Continuous Boil-Off of Rayon Fabrics. Non-ionic detergents, because of their extremely effective detergency, are rapidly displacing all others for this type of work. Extremely low concentrations of these materials are being used for the

(Continued on page 223)

Extract of paper "Surfactants in the Textile Industry" by H. C. Borghetty, Rohm & Haas Co., Philadelphia, Pa., presented before a recent meeting of the Southeastern Section, American Association of Textile Chemists and Colorists, in Talladega, Ala.

New Instrument Predicts Cotton's Tendency to Form Neps

A new instrument for predicting the tendency of raw cotton to form neps has been developed in research for the U. S. Department of Agriculture by the Department of Textile Research at North Carolina State College.

Called the Nepotometer (from *Nep-Potential-Meter*), the new instrument will predict the comparative "neppiness" of cottons in processing, and classify cottons into one of a number of standard classes according to their nepping tendency.

The machine consists of three cylinders with a covering having many finely meshed wires that simulate a strenuous carding action on the 25-grain sample fed to the machine, disentangling and straightening the fibers for spinning. The manipulation of the cotton fibers by the wires causes the formation of neps in proportion to the nep-forming tendencies of the particular type of cotton being tested.

At the end of the test, a neppy web is stripped from the top cylinder and compared with photographic standards for "neppiness" for classification of the sample. The time required for the instrument to make the test is 4 minutes, although a twin-head machine is now under construction that will speed up the testing.

The instrument is self-stripping. Its size, 16 inches long, 13 inches wide, and 16 inches high, permits its convenient use on a laboratory table.

The instrument was developed and designed by J. F. Bogdan, director of processing research, and C. M. Asbill, Jr., head of the Department of Machine Design and Development, North Carolina State College. R. J. Cheatham was the specialist representing the USDA at the college on this project.

ed most. Also, the close checks made by a mill representative who commutes regularly to confer with the students, reports from the textile school, and periodic grade reports serve to pinpoint noteworthy factors in the training program and the trainees.

No Strings Attached. Each trainee is thoroughly informed about the policies and practices of the West Point Manufacturing Company and the fact that there are no strings or obligations attached to the training program. Those trainees who remain with the company do so because they are sold on the merits of West Point and the way the company does business. This is all part of the planned routine of working through the plant and studying. Thus, final evaluation of the company's merits is left in the hands of the trainees.

Each student is accorded the same insurance, vacation pay, and other benefits as a regular employee. While in training he is considered a regular "West Pointer" and is expected to represent the company commendably wherever he goes.

Dynamic Plan. A total of 69 applied for the first scholarships to be awarded, and 27 were selected to take the training. About half of the students work in the mills while the others attend A.P.I..

At the end of each year a review of the entire program will be made to determine needs for the following year. The number of replacements and additional trainees, changes in school curriculum, revisions of mill training procedures, and other vital factors will be considered in order to keep the program dynamic.

Co-operation of Supervisors. For the program to go and to grow in usefulness, the wholehearted cooperation of departmental overseers and shift foremen is necessary. The boys need the helping hand of the man with the practical slant on mill operation. Answers to many of the questions asked in oral and written mill examinations are not to be found in the usual textbook.

Preliminary plans were outlined to all supervisors. Purposes were explained and suggestions requested. Many helpful comments and ideas were received and incorporated in the final plans. These included recommendation of applicants, making out mill training questions, scheduling and balancing training time on various operations, and other things for the good of the cause.

All were in agreement that their own climb upward would have been less rocky and discouraging if they had been given this training opportunity. They were glad to see these young men selected and given the chance, especially since all were either from the employee ranks or were sons or close relatives of employees.

Time Charges. Students' time and pay are handled as for other employees except that they are not charged to departmental costs. A separate account is set up for this purpose.

Each boy is allowed to work only 40 hours per week on training. He may be used if needed on production jobs over and above the 40-hour week; however, this extra time, including overtime bonus, is charged to the department and not to training. Trainees receive an increase in pay at the end of the second work quarter and another after the fourth work quarter.

Principal Difference. The principal difference between this and former co-op plans is that the trainee learns, as well as earns, on the job. Previously, he was just given an opportunity to earn money for college expenses. It was hoped that he could learn from the pick-up or rub-off-and-on method.

The emphasis now has been rightly placed, it is believed, on the mill training phase of the program. Such is the opinion of many that have made a critical analysis of the program plans, policies, and procedures.

Quick Change!

to remove sprocket shafts on cards

By Overseer of Maintenance

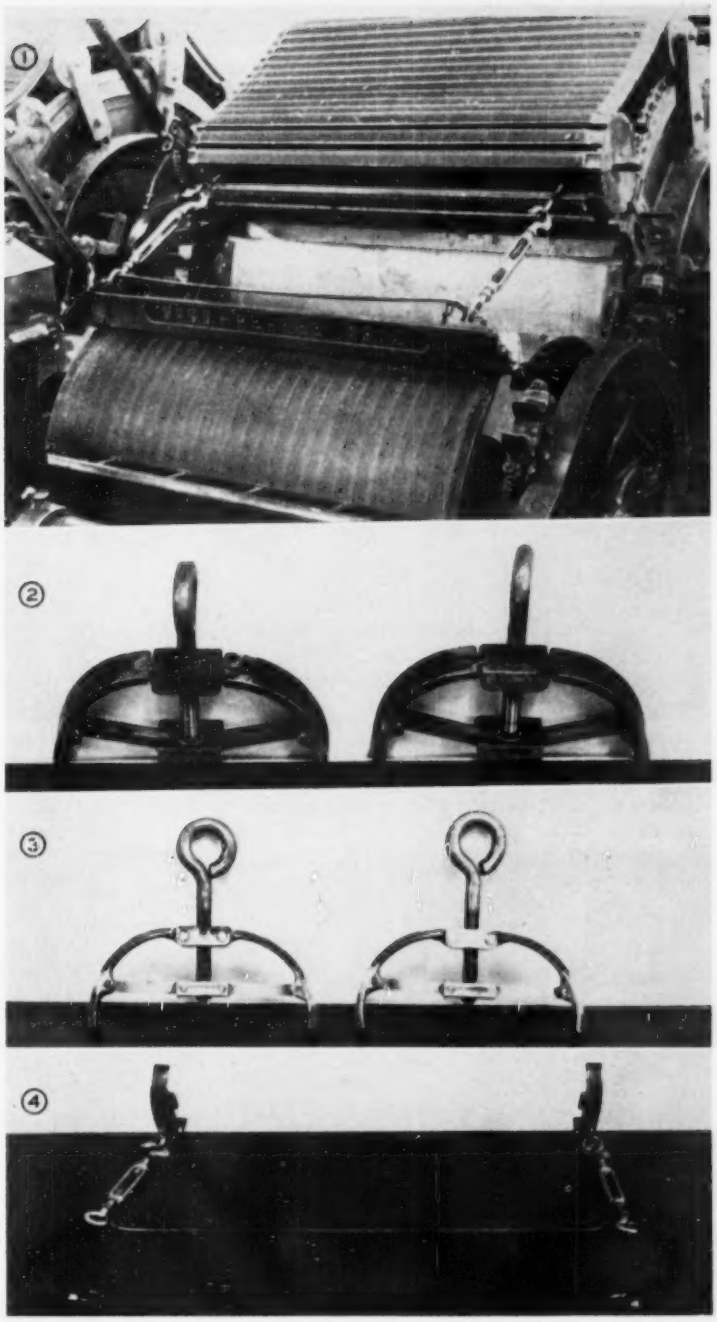
EXCLUSIVE

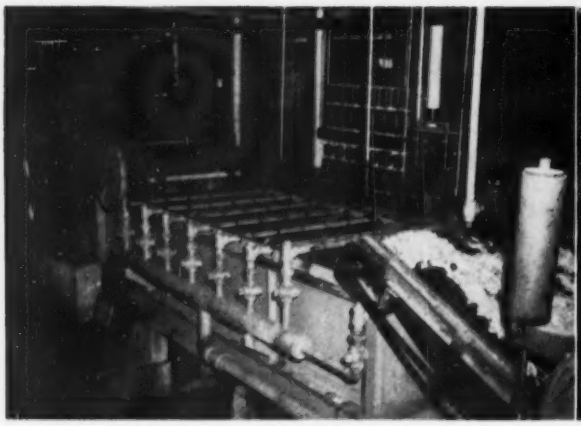
IN THE COURSE of normal use, the sprocket shafts of cards wear in the bearing areas and have to be repaired or replaced. Usually, this necessitates the removal of all the flats and chains and is a time-consuming job.

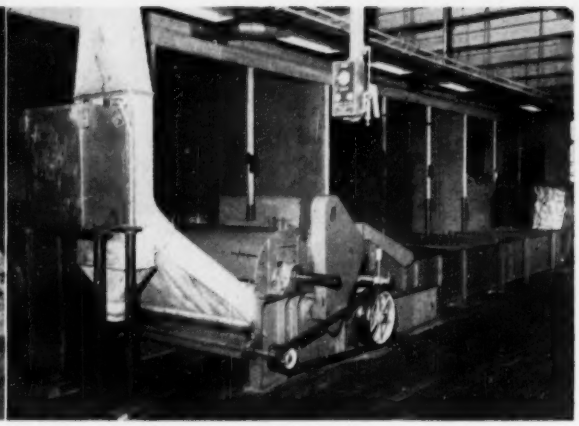
We have devised a method of removing these shafts which requires the taking out of only one flat, thus reducing the time for repairing or replacing the sprocket shaft from approximately three hours per card to 30 minutes per card.

The procedure for the use of this device is as follows: Remove one flat as shown in the accompanying picture No. 1. Insert the expander (pictures 2 and 3) through the opening, turn the expander 90 degrees, and screw in the expander screw until the flats are lifted clear of the flat discs. The expander is then secured by two turn buckles and short lengths of chain to the doffer grinding stands (picture No. 4).

The shaft may then be removed and a new or repaired shaft installed.







JET WET-OUT TANK FOR LOFT. After dyeing, wool goes through this jet wet-out tank (left) instead of usual spray, on its way to dryer. Excess dye is washed out, hence wool is more lofty. Dryer has two drying sections, one cooling section — wool goes to mixing bins cool (right, rear); there is little chance for spontaneous combustion. Wool is dried to 10-12% moisture content. Super picker in right foreground has electric magnet which removes handful of bottle caps, wire, and other tramp metal between 4-hour cleanings.

Wool Quality

Modernize and

Staff Prepared

EXCLUSIVE

UNTIL recently, all carpet yarns used by Artloom Carpet Co., Philadelphia, were purchased from outside sources — the company operated no spindles of its own. Since Artloom's management had decided that closer control over its yarn supply was necessary, a separate corporation was set up to acquire and operate a yarn mill.

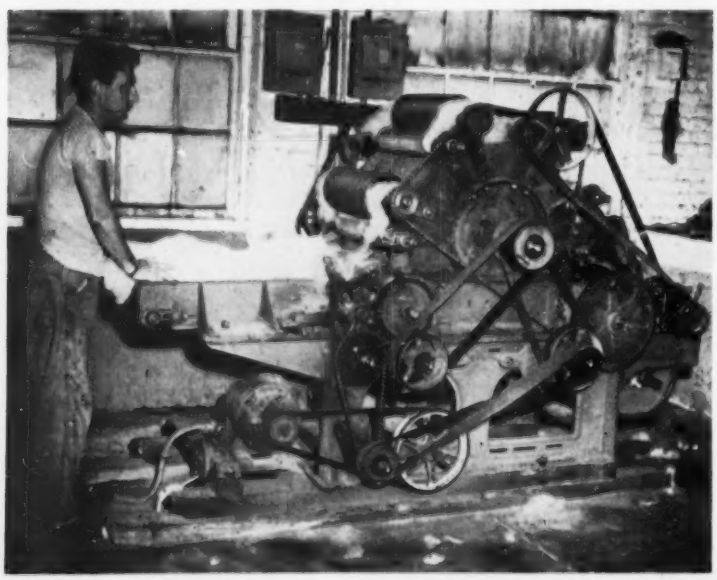
The new company, Greenville Mills, Inc., Greenville, N. C., produces woolen carpet yarns and blends for use on the parent company's Wilton, velvet, and Axminster looms. Production was begun in May, 1951, in a former cotton mill building.

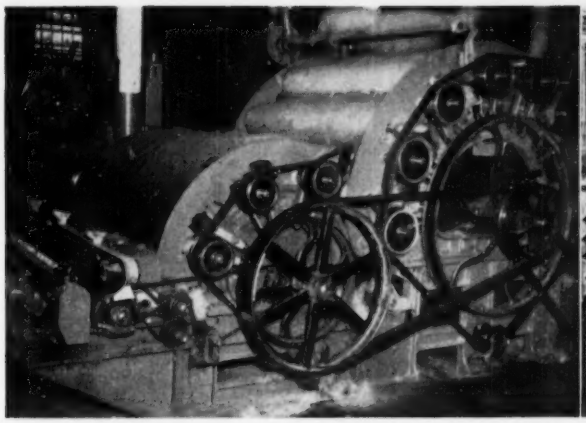
Since there had previously been no woolen mills in the Greenville area, a program, administered by key personnel, was set up to train locally-recruited employees. The training program was initiated about three months before the start of actual operations. The job of training practically the whole working force was made easier by the fact that the majority of employees had had cotton mill experience.

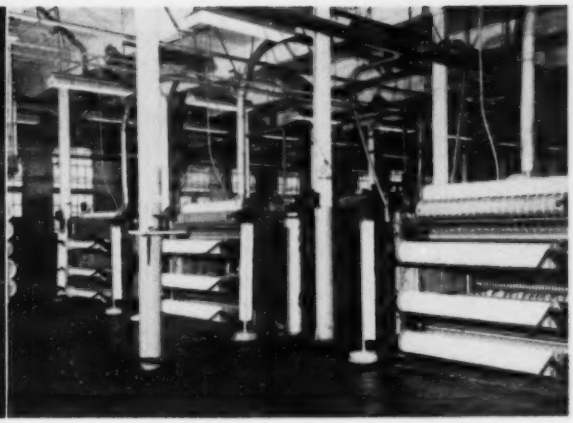
Most of the machinery in the plant is new, although some of the dyeing equipment was shipped from Artloom's plant in Philadelphia.

Foreign wools, all of which are received scoured, are used since the mill spins carpet yarns exclusively. Such names as India, Aleppo, Cordova, Awassi, New Zealand, B. A.'s, and several others, indicate the wide range of blends spun. In addition, 15-

FOR SAMPLE BLENDS. This sample card is 24 inches wide, is used for preparing sample blends. Yarn is "spun" from sample blends by hand, twisted by attaching one end to center of cylinder pulley.





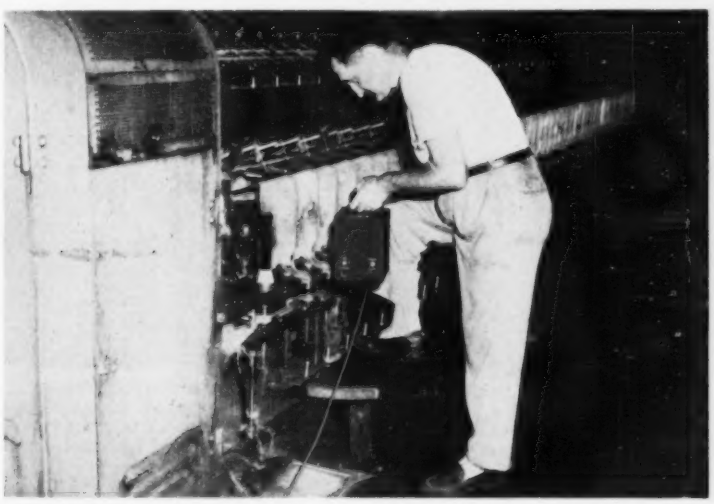


BREAKER CARDS have bur cleaning breasts (left) equipped with bur rolls and guards; 36-inch diameter breast is unusually large. Cards are vacuum stripped once a day; oftener when color changes are made. Tape condensers (right) are equipped with rubber aprons and tapes, since the bulk of colored stock is spun with water. Leather aprons and tapes are said to deteriorate faster than rubber unless an oil/water emulsion is used. Greenville Mills keep oil out of stock; oil dulls colors, contributes to carpet soiling.

Train

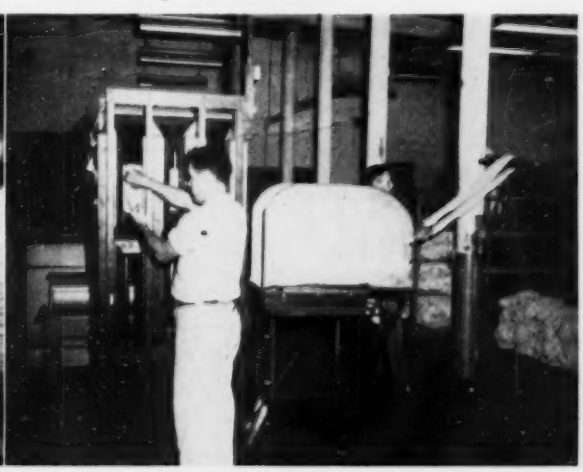
denier acetate and viscose carpet staple are used. Carpet counts spun range from 33/3 to 58/2 and 45/3.

The accompanying pictures show some of the unusual aspects of Greenville Mills' operation. Read the captions carefully. They contain helpful manufacturing information.



STROBOTAC is used effectively to check spindle speed at regular intervals, control twist.

TO MINIMIZE KNOTS. Two spinning bobbins, holding from 15 to 17 ounces each, make one twister bobbin on this Whitin Model K selective-type trap twister (left). One twister bobbin in turn makes one winding package for the creels in back of the looms at Philadelphia, or two skeins. Knots are thus minimized, a feature of particular importance in carpets. Skein baler (right) was designed and built at mill, is operated by compressed air. It makes 50-pound bales of undyed skeins for shipment to Artloom.



EVENNESS OF PICKER LAP NOT IMPORTANT? We have all felt that the lap was not too important as long as it looked reasonably good and would hold together and unwind on the card. To further confound this situation, one of the oldest cotton research institutes abroad has made the statement that the picker lap was of no great importance. How wrong can we be? You can't make even card sliver from uneven picker lap.

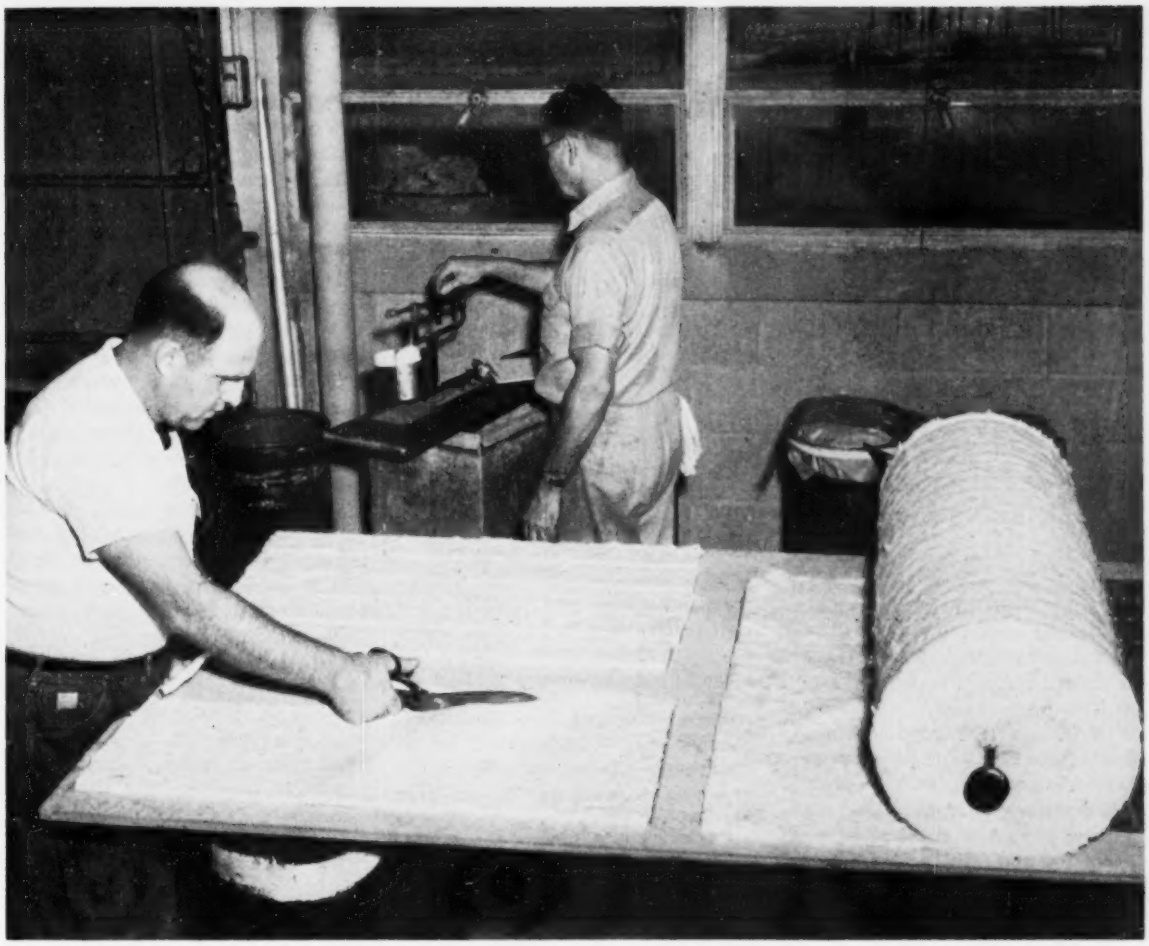
KNOW YOUR

By M. Earl Heard, Jr.

The Tritex Corporation

EXCLUSIVE

PROCESSING of cotton into yarn has undergone some important advances in the last decade, but at the same time we have had problems that offset many of them. For instance, we now have fewer doublings to decrease the cost, but we have had a lowering in grade of cotton and damage to the stock at the gin. We have adopted an entirely new concept of opening and blending and we get a better quality product as the result, but it is more costly. We have ways and means of improving the picker lap, better methods of testing the lap, and research into evenness by statistical methods permits us now



CHECKING LATERAL VARIATION OF PICKER LAP by cutting a yard of lap into ten 4-inch wide strips (each one yard long) then weighing the strips. Some laps have been found that varied as much as 60% across the width. Yard to yard variation in the picker lap is very long term variation in the yarn, and the pattern of lateral unevenness remains consistent except when chokes alter it.

PICKER

to see any changes in later processes.

The cotton system on carded yarns originally had three processes of picking, three processes of drawing (even today in England and some mills on the continent three processes are used), four processes of roving, and double creel spinning.

Today in cotton manufacturing on carded yarns we find one-process picking in universal use and a trend towards two-beater pickers instead of three beaters; two processes of drawing, or one process of lap back drawing, and one process of long draft roving which may be run either single or double roving in the spinning frame creel.

Therefore we have gone from approximately 60,000 doublings at low speeds and job loads that were guesses, to either 36 or 72 doublings at higher speeds and carefully studied job standards.

Most Doublings But Not Best Yarn. In the recent report of the 17-mill test [see TI, Oct. 1952, 111-126] conducted by the National Cotton Council and The American Cotton Manufacturers Institute, the mills making 80 x 80 print cloths had doublings ranging from 6 to 144. Strange as it might seem,

► The mill with the largest number of doublings did not produce the best yarn or fabric. However, there is little argument as to which mill had the highest cost.

► Yard to yard variation in the picker lap is very long term variation in the yarn, and it is important for long term control of yarn and cloth weights.

► The pattern of lateral unevenness in the picker lap remains remarkably consistent except when chokes alter it. When a lap has a heavy streak down the middle, that portion of the card cylinder which receives this heavy streak is in effect carding at a higher rate of production than the other part of the cylinder. The result is card sliver consisting of well separated and poorly separated fibers.

► We will have to change our entire philosophy and method of cleaning pickers if we hope to get a uniform lap consistently.

the mill with the largest number of doublings did not produce the best yarn or fabric. However, there is little argument as to which mill had the highest cost.

Doublings cost money, so the pressure is greater today than ever before to shorten processes, placing a heavier responsibility upon management to know more about each operation and how to hold the performance of individual processes within closer tolerances. The tremendous interest today in quality control and testing by mills which only a short time ago scoffed at testing laboratories and coefficient of variation, is evidence of the awakening by mill management.

Machine-Harvested and Over-Machined Cotton. We have also undergone a revolution in our raw material. In the old days of many doublings and slow speeds, cotton was all handpicked and ginned slowly and carefully after storage and conditioning in a seed cotton storage house. Today, we are in a mechanical age of cotton production, harvesting, and ginning, with emphasis on getting the cotton to market as quickly as possible, irrespective of its condition.

The grade of American cotton has been steadily deteriorating during this period of change. There is a rising storm of complaint all over the cotton spinning industry with respect to over-drying and over-machining of cotton at the gin, and the increasing amount of trash mixed in with the lint. One mill is reported to have a refusal clause in the cotton contract if the stock is ginned by one method.

Better Opening Now Necessary. Present day cotton must be so thoroughly opened in order to do effective cleaning that the last five or ten years have seen the greatest interest ever known in rebuilding and equipping opening rooms to cope with the situation. Many mills have installed two, three, or even four blending feeders per picker and have tried, and are still trying, every conceivable combination of existing opening and cleaning equipment.

The production of cleaning lines has been reduced from 1500 - 2,000 to 750 - 1,000 pounds per hour in order to secure a more open and cleaner stock.

Picker Is Our First Control Machine. Getting back to operations within closer tolerance, the picker is the first machine in the mill where we begin to control weight per unit length; it is set up with the proper draft to produce as closely as possible a lap of given yardage and given weight. Total weight and yard weighings were the only check we had until the development of the Saco-Lowell lap meter. This device gives yard to yard variation of the lap.

Today we know that we have two other types of variation in laps that we have been aware of but never measured, and they are fully as important, if not more so, than the two variables that we have been measuring. I refer to "within-yard" variation and "lateral" variation, or variation across the width of the lap.

Take your own mill and calculate how much one yard of picker lap is drafted to produce yarn. How many bobbins with your average yarn count hold that much yardage - 50 - 100 - 200? Do you make any tests comparing the weight of say 100 bobbins of yarn with the weight of 100 other bobbins? No, you probably don't! You are interested in yarn appearance across the width of a fabric or around knitted goods.

What I am saying is that yard to yard variation in the picker lap is very long term variation in yarn, and it is important for long term control of yarn and cloth weights. However, it is necessary to use a shorter measuring device if we are to keep a closer control on our processing. You wouldn't expect your machine shop to use only a yard stick to make a shaft for a precision bearing, and not have micrometers and dial indicators.

Lap Okeh if it Unwinds on Card? Pickers are high production machines, usually processing from 300 to 400 pounds of cotton per hour. We have all felt that the lap was not too important as long as it looked reasonably good and would hold together and unwind on the card. To further confound this situation, one of the oldest cotton research institutes abroad has made the statement in the past that the scutcher (picker) lap was of no great importance.

How wrong can we be? You simply can't make a silk purse out of a sow's ear. And you can't make even card sliver from uneven picker lap!

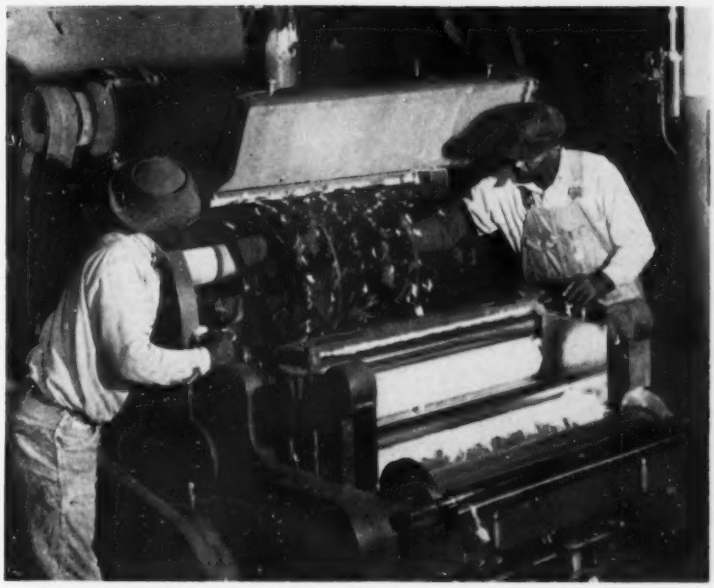
How to Check Lateral Variation of Lap. If you really want to see what your pickers are doing, lateral variation can be easily checked by cutting a yard of lap into ten 4-inch wide strips (each one yard long) then weighing the strips. Make at least five 1-yard tests in each lap to get a representative sample. We have found laps that varied as much as 60% across the width.

Effect of Lateral Variation. The pattern of lateral unevenness remains remarkably consistent except when chokes alter it. When a lap has a heavy streak down the middle, that portion of the card cylinder which receives this heavy streak is in effect carding at a higher rate of production than the other part of the cylinder. There are more fibers per square inch on this section of the cylinder. Consequently, these fibers do not get the same degree of separation, and as a result the card sliver consists of fibers which are very well separated and fibers that have poor separation. In later processes when this sliver is drafted, the fibers which are not well separated come out in a bunch and there is the thick place in the yarn immediately followed by the thin place.

The importance of fiber separation can be easily shown in a more conventional way: In your mill if you could keep your present cost figures, would you like to cut your card production to half your present production? Say from ten pounds per hour to five? You know your mill would run better simply because the fibers are staying on the wire longer, better fiber separation is obtained, and better drafting and running conditions are the result.

Short term or within-yard linear variation is directly related to the coefficient of variation of the card sliver weight per yard and can be readily obtained by carding a lap from each picker on the same card and checking the card sliver obtained. One lap will produce about four cans of card sliver, and we like to take 50 weighings of 1-yard each at random from each can, or a total of 200 weighings, and calculate the coefficient of variation.

Controlling Factors for a Good Lap. Inasmuch as pickers are heavy duty, high production machines, and assuming that the picker is kept in first class mechanical condition, two factors are of prime importance in producing a lap of good quality. First, the uniformity of feed and the degree of openness of the stock; and, second, the control of air and the distribution of the stock on the screens of the finisher beater section.



LICK AND A PROMISE CLEANING on pickers is wholly inadequate. We will have to change our entire philosophy and method of cleaning pickers if we hope to get a uniform lap consistently. Unless a mill is fully convinced as to the necessity of frequent and thorough cleaning, it is useless to spend money on picker improvement.

Both of these factors are important; however, the latter is by far the most important. For example, the accompanying table shows coefficient of variation of card sliver made from laps from three pickers, all carded on the same card for a period of 10 months. These pickers were all on the same cleaning line and all on the same stock.

	Picker A	Picker B	Picker C
	4.29	6.31	2.30
	4.45	5.80	2.99
	5.34	4.58	3.08
	4.08	3.96	3.06
	4.19	4.75	3.24
	6.44	4.05	3.19
	2.35	3.69	2.47
	5.80	3.14	2.38
	4.30	5.16	3.14
	4.81	3.05	2.75
C. V. Avg.	4.64	4.44	2.86

The proof of the pudding is in the eating, and if the lap has been improved it will positively and definitely show up in card sliver weight per yard variation. All three pickers were kept in excellent mechanical condition and thoroughly cleaned. Picker A had one test of coefficient of variation 2.35 which shows that occasionally a good lap was made. Picker B had two good tests, one of 3.14 and one of 3.05. However, picker C which had been modified*, consistently produced good laps; and this is the kind of performance we must have, and should strive to obtain.

Emphasis on Cleaning Pickers. We will have to change our entire philosophy and method of cleaning pickers if we hope to get a uniform lap consistently. The lick and a promise, haphazard cleaning done on pickers in many mills is wholly inadequate. Unless a mill is fully convinced as to the necessity of frequent, thorough cleaning it is useless to spend money on picker improvement.

Most mills run yarn counts slightly on the heavy side for safety. One of the consistent results from the picker modification is the fact that yarn made from such laps will be about .10 counts lighter than yarn made from a regular picker. The ability to control more closely count variation can mean sizable savings in cotton and cloth weights.

Frequently some firm will make an improvement in some process

*Redesign of the portion of the picker between the beater and the screen, the installation of an air intake duct, and the use of a cylindrical-type beater, all on the finisher section.

Wanted: More Variable Speed Drives on Textile Processing Machines

Speaking before the Textile Engineering Division during the recent annual meeting of the American Society of Mechanical Engineers on the subject "What Textile Preparatory Machinery Needs Variable Speed Drives and Why," Joseph L. Delany, general superintendent of Joanna (S.C.) Cotton Mills Co. first suggested the picker evener motion as a prospective point of application.

"Now here is where a modern variable speed unit, controlled electronically and operating in a dust-tight casing, would really do a job," Mr. Delany said. "This drive would require a minimum of maintenance and give positive control of the feed roll speed. It would have no mechanical linkage to foul, no bearings to stick, no rods to bind, neither slippage, stretching, nor narrowing of its belt. The drive would be powerful enough to handle the load with a high margin of safety."

Pointing out that a similar unit might be adapted to the card feed roll, Mr. Delany predicted that if card sliver evenness as measured on the Saco-Lowell Sliver Tester could be reduced to 5% or 7%, then doublings, except for the very fine numbers, could be eliminated almost, and large size roving would become practically universal. This would pay off handsomely in higher production and lower costs, he declared.

A third processing machine on which the variable speed drive could conceivably be applied, according to Mr. Delany, is the drawing frame.

Citing unsuccessful efforts several years ago to make more even drawing sliver by inserting a small pair of cones into each delivery of drawing, he said that "if this old idea could be taken up, given a shot of electronic stimulation, and applied with present day know-how, it might work."

In Mr. Delany's opinion the present day roving frame produces "a pretty uniform hank of roving," but he would "like to be able to look forward to a device based on the principles of the variable speed drive which would do away with cones and slipping belts, planetary gear compounds, tension racks and gearing."

As for the spinning frame, he visualizes a very light, low cost variable speed drive built into the gear train between the twist gear and the front roll. This could then be set to run plus 5% normal twist on the first part of the doff cycle and minus 10% or more on the latter part.

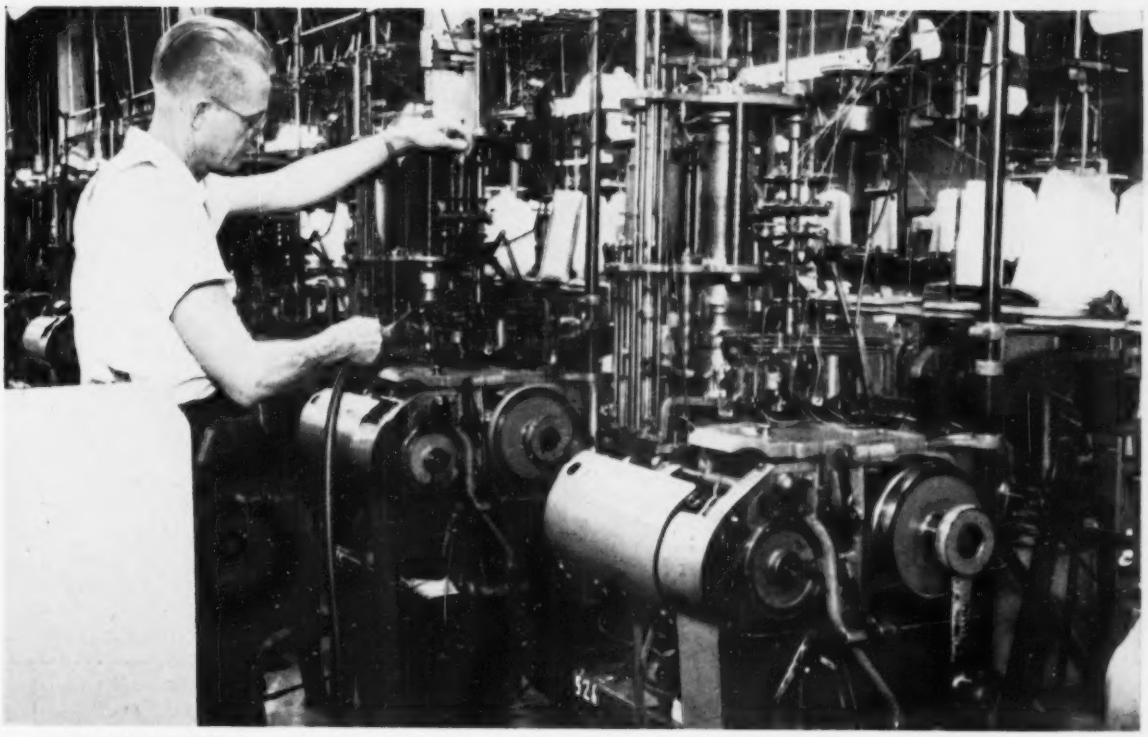
in the card room and the mill man will say, "We are not interested because it did not show up in the yarn." Regardless of whether the improvement can be checked three or four processes away, if the stock is definitely, provably better on the machine on which the change was made, or on the process immediately following, it should be a challenge to the mill to closely examine the remaining processes and determine how and where the improvement was lost. There is no magic wand for sale that can cure all the troubles present. It is, instead, a job of making each machine perform at its best.

Are We Using the Correct Yardstick to Measure a Change? In the *Journal of the Textile Institute*, July 1952, C. V. Lund of Courtaulds reported the results of an exhaustive test in which he made 4 yarn counts of spun rayon on 5 different systems. In order to obtain many different measurements, Lund cut the yarn obtained from each series into various lengths of 1″, 6″, 54″, and 120 yards, and then calculated the coefficient of variation of count variation on each length.

When plotting coefficient of variation as the ordinate against length as an abscissa, the general outline of the curves was closely related and showed that the most critical area was in the vicinity of 27-36″ lengths. Since our standard yarn reels are 54″ in circumference, it would seem worthwhile to use 27″ or possibly 54″ so that a standard skein could be cut easily to this length, or used intact. There are very few things one might suggest that have not been tried in a cotton mill by someone in the past. However, we may have deceived ourselves by having unknown variables or by not having the right yardstick to measure any change. For example, when comparing the results of a picker modification with another picker on the same cleaning line that had not been changed over, laps from each picker were carded on the same card and the coefficient of variation of the weight per yard of the card sliver was determined. Picker No. 1 which had been modified had a card sliver coefficient of variation of 3.01 whereas No. 2 had a card sliver coefficient of variation of 3.67 which was also pretty good. The $64 question was whether this difference in quality of the laps and card sliver was worth fighting for. The following information shows definitely that it was worthwhile.

When the card sliver was processed through exactly the same delivery on drawing, same spindles on roving and spinning, it showed a 7% improvement in count variation on the traditional 120-yard skein test. But when a 27″ length test was used the yarn showed from 22 to 28% improvement in count variation. This yarn was slightly better on the nonuniformity test on a Brush instrument and had a little better coefficient of variation. On the single strand strength test on the Uster automatic machine the total strength and coefficient of variation was slightly better also.

Thus, through improvement in the physical operation of the picker, and with more adequate testing methods than those employed by our grandfathers, we not only can assume that properly starting cotton through the manufacturing processes is beneficial, but can prove that a better yarn results from improved preliminary processing procedures.



A BAD PRACTICE. Lint from low grades of yarn may be blown across the line onto machines using more expensive yarns. This lint may cause press-offs on the more expensive yarn.

Press-Offs Are Costly!

Here's how to reduce them

By K. O. Metz

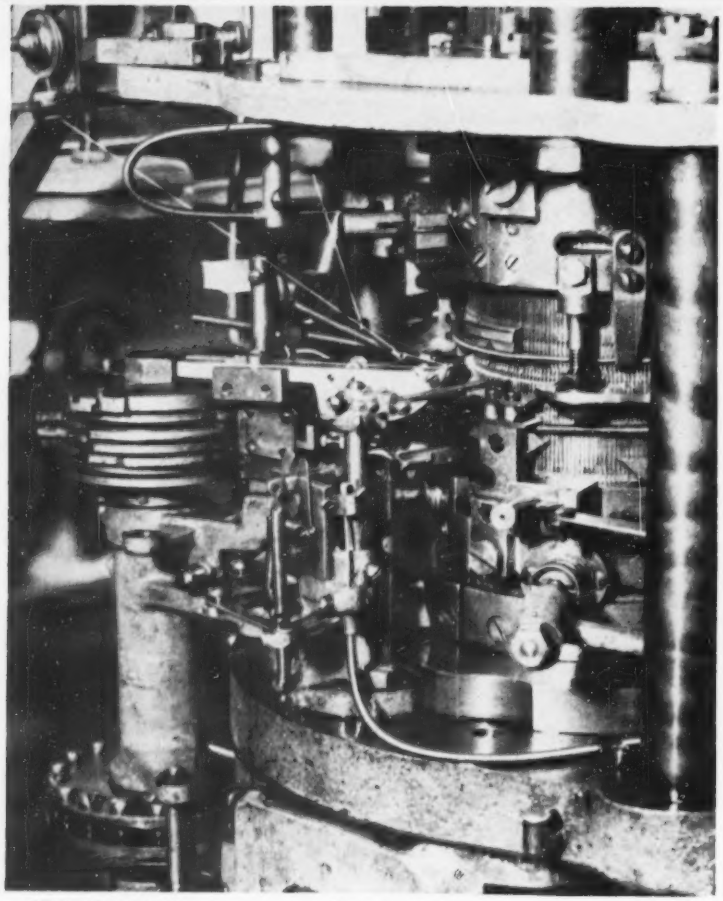
EXCLUSIVE

WHEN you have the opportunity to watch a large number of Komet machines consume hundreds of pounds of yarn every day, you are bound to learn something. Among other things, I have learned that press-offs are costly. How costly depends in a large measure on machine fixers, knitters, instructors, and knitting department foremen.

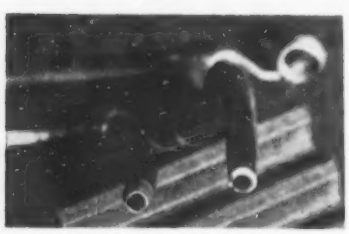
Show Cost. The most costly press-offs are the kind which can be prevented. There are no cheap yarns on the market today, and knitting needles at eight cents each (more or less) are not cheap. There are quite a number of things which can be done to help eliminate unnecessary press-offs. The first important step, in my opinion, is to make everyone in the knitting room *cost conscious.*

Knitters and fixers should be shown how much money every pound of waste represents for various styles, using different kinds of yarn. For example, the loss incurred by a pound of waste may not mean much to knitters and fixers until they are shown that the yarn alone in one pound of waste costs $.85, $1.25, or even $5.00 for some types of nylon. Likewise, when we point out that one press-off can ruin five or ten dollars worth of needles, not to mention damage to machine parts and production losses, knitters and fixers will have more respect for preventable press-offs.

Find Cause. The second step toward preventing press-offs is to *find the cause.* Here is where knitters and fixers can render a real service. Part of their respective jobs is to know the cause of press-

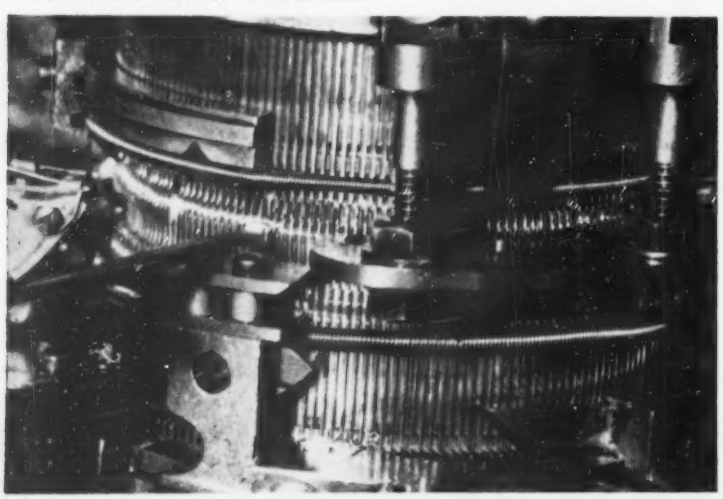


STOP MOTIONS in poor working condition may help to increase press-offs. Many fixers and knitters have the false impression that stop motions will prevent all press-offs. Good housekeeping alone is an important factor in reducing press-offs.



←— **SMALL GAPS** will eventually be cut in the inner side of the feeder eyes, especially by hard yarns. When this occurs, ordinary knots present in the yarns will cause press-offs.

PRESS-OFFS or other trouble which may cause machines to load up may leave damaged needles and sinkers which will cut yarn off and make more waste or seconds later.



offs and to do something about it. Bad yarns, carelessness on the knitter's part, machine trouble, electric stop motions not working properly, mechanical stop motions not working properly, excessive amounts of loose lint accumulating on machines—these are a few things which help to increase press-offs. Plain everyday good housekeeping will help a lot.

Most mills provide some means for keeping machines clean. Some use air pressure tanks with hose connections; others prefer portable blowers to blow off loose lint at regular intervals on each shift. On numerous occasions I have seen a cleanup man blow lint off of machines using yarn which cost $.85 a pound, and half the lint was blown across the line onto machines using mercerized gassed yarn which cost $1.35 per pound.

The surplus lint from the cheaper yarns was causing press-offs on machines using high priced yarns. You may say, and rightfully so, that any thoughtful person would avoid such a condition. The cleaning operation was not at fault, but the man doing the job was partly to blame, and the way the job was done added fat to the fire. The most offensive culprit was the man who taught the cleanup man how to blow off the machines; he failed.

Stop Motions. Some fixers and knitters have the false impression that electric stop motions will prevent all press-offs. True, they will prevent press-offs should the operators let all of the yarn run off the cones, and they will prevent press-offs in the event the cones are underwound or if the yarn hangs on the cones for any reason. However, there are many instances where small slubs, large knots, and loose lint are not affected by stop motions, and when they reach the feeder eyes and fail to pass through freely, a press-off is assured.

Once more the machine fixer enters the picture. Small gaps will eventually be cut in the inner side of the feeder eyes, especially by mercerized or similar yarns. When this occurs, ordinary knots present in the yarns will cause press-offs. Yarn feeders set too close to latch guards will produce the same re-

sults. Knitters should know if certain machines cause more press-offs than others and call the machine fixer's attention to this fact so he can determine the cause. Many Komets today are running on numbers requiring yarn changes, another reason why the machine fixer must be on his toes.

Komet yarn changers are not difficult to adjust, but it is a known fact that press-offs will occur if the yarn changing mechanism is not properly adjusted.

Polish Inner Surfaces. Proper shaping and polishing of the inner surfaces of the yarn feeder eyes or holes are important. Many press-offs may be caused by raw or sharp edge on the inner side of the feeder. Emery cord and strips of twisted crocus cloth will help in polishing feeders, but I have found that a small ¼" round carborundum stone (or stick) ground to a 45° angle and used in a drill press will do a better job in removing the raw edges on the inner side of a feeder eye than anything else tried to date. A requirement is constant vigilance by the machine fixer to find these things and correct them promptly.

Frequently after press-offs or other trouble which may cause machines to load up, damaged needles and sinkers will cut yarn off and make more waste or seconds. Careful checking in starting machines up again will prevent this. Excessive tension on any kind of yarn normally used on Komets (except plaiting yarns) should be avoided. Extra tension has no practical value and helps to increase the number of press-offs in many instances.

Waste Reports. Daily waste reports should be posted in the knitting departments showing the amounts of waste made by individual operators, and a comparison of operators' work on similar styles will show where to look for trouble. A good beginning toward reducing waste and seconds can be made by selecting the right type of person for the job and paying close attention to a well-planned training program for knitters and fixers. Knitters and fixers should never lose interest in fighting waste and seconds. The value of knitters and fixers is at least partially determined by the level of waste and seconds.

I have lost little sleep over machine failure; sooner or later ways and means are found to make machines behave. The biggest problem lies in the mental attitude of the operatives.

Cut Wool Scouring Cost and Time with Non-Ionic Detergents

The non-ionic detergents are unsurpassed for raw stock scouring of wool, giving low scouring cost, quick rinsibility, a softer and cleaner stock, in addition to permitting the use of lower alkalinities and eliminating the presence of the harmful, tacky, hard water salts which are present when soap is used. The average wool containing 15% grease and 25% dirt and other impurities can be scoured to 0.5% grease at a total detergent consumption of 2 lb/per 1,000 lb of greasy wool. It has frequently been found possible to reduce the scouring time appreciably when non-ionics are used, thus effecting further savings in cost. They rinse out readily in cold or lukewarm water, carrying the alkali with it, in a much shorter time than soap.

Another important advantage of a detergent over soap lies in the high degreasing qualities under mildly alkaline conditions. The alkali can thus be concentrated at the beginning of the scouring cycle, where the wool is best protected by high initial grease content. Subsequently the synthetic is used to scour the last 2-3% of grease, which is the most difficult to remove. The bath at this stage is less alkaline and less harmful, and the removal of the alkali from the fiber is accomplished effectively in the subsequent rinsing bowl.

The initial bowls, charged with soda ash, have a pH of 11.2. This pH decreases gradually to 9-10, because of the consumption of alkali by the wool grease and the conversion of soda ash to bicarbonate. The non-ionic detergent scouring bowls are maintained at pH 8-9 by carry-over of alkali with the wool itself. No additions of soda ash are necessary here, which means that there is less alkali to be neutralized during dyeing, and less danger of drying alkali into the delicate, clean wool fiber.

Affinity of the non-ionic for wool is low; therefore, no detergent is left on the wool. This point is of advantage, particularly for wool on the worsted system, where traces of grease and soaps often cause "balling" on the cards. The resulting scoured wools can be carded at 1% grease content without difficulty, whereas soap-scoured wool at 1% grease content gives trouble because there is an additional 0.3% of soap present.

The lime salt stability of the non-ionics and this high lime soap dispersibility eliminate any danger of curds, even in the presence of high lime content wools. Non-ionics are readily adapted to any system of circulation in the bowls. Desuinting in the first bowl with water or exhaust from the rinse bowl is satisfactory and advisable. Counterflow systems can be used, although individual circulation of the liquor in each bowl is the best controlled system and gives highest recovery of grease.

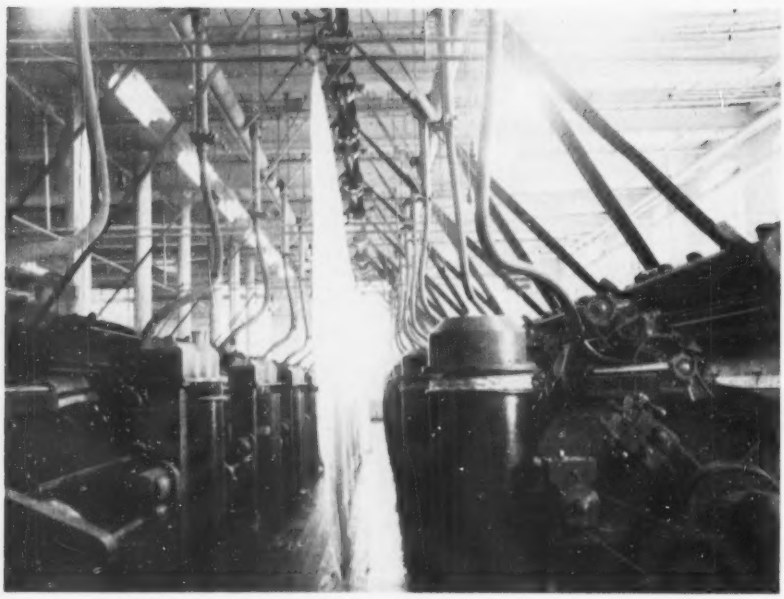
Recovery can be carried out on mechanical systems of centrifugal separation without interference by the non-ionic. 60% grease recovery is considered good for such equipment. Chemical separation can be accomplished by variation of standard procedures.

Scouring of Wool Tops. The good detergency and quick rinsibility of the same non-ionic detergent will be found effective at 1 oz. per 10 gallons for scouring wool tops in the back washer.

From paper "Surfactants in the Textile Industry" by H. C. Borghetty, Rohm & Haas Co., Philadelphia, Pa., recently presented before the Southeastern Section, American Association of Textile Chemists and Colorists, in Talladega, Ala.

HERE'S THE DOPE ON

Problems with dyed-in-the-melt fibers can be overcome;



TO REDUCE CONTAMINATION.
Some mills use a drop cloth or plastic curtain between the cards.

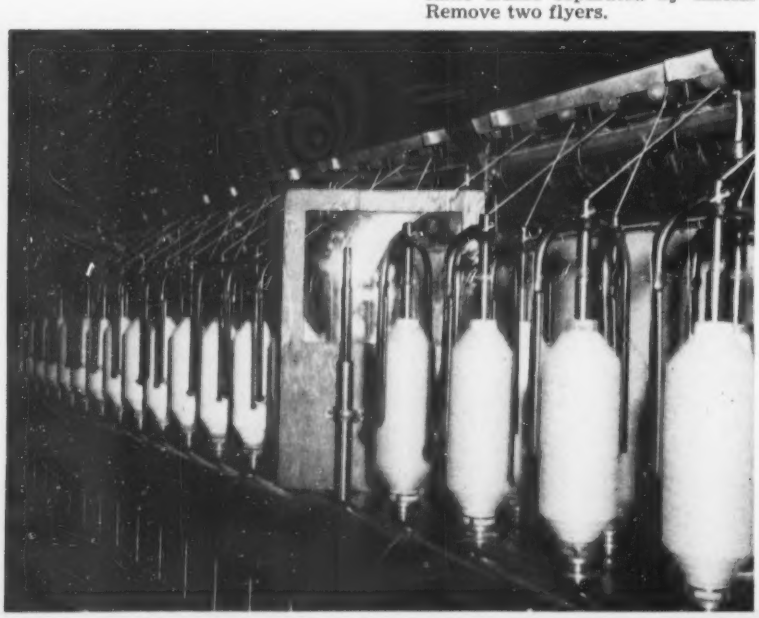
"DOPE-DYED" describes synthetic fibers colored before extrusion by incorporating pigments or dyestuffs into the spinning solution.*

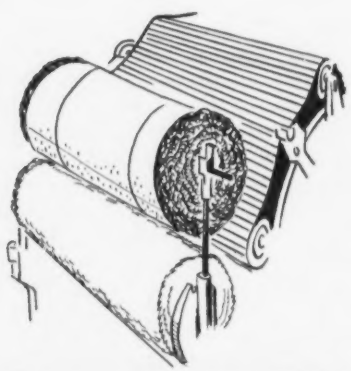
Dope-dyed fibers are not new to the textile industry; in fact the idea of adding color to the spinning solution must have occurred to Chardonnet soon after he produced his first artificial silk.

Synthetic fiber producers have experimented with dope - dyed yarns and staple for years, and have offered them commercially from time to time. But except for black, there has been little demand for dope-dyed yarns, principally because of the inventory problem which it was supposed would arise from the varieties of colors required by changing fashions.

*"Solution-dyed" and "spun-dyed" are other terms used to describe synthetic fibers colored before extrusion. Strictly speaking, "dope-dyed" refers only to acetate, but seems to have won the widest acceptance as a term to describe all classes of fibers so colored.

TO REDUCE CONTAMINATION.
Different dope-dyed blends on same frame separated by shield. Remove two flyers.





TO REDUCE CONTAMINATION.
Wrap picker lap in paper. Also, reduce size of lap. One mill runs lap weight of 43½ lb.

DOPE-DYED

Staff Survey and Report

fastness properties and unusual effects outweigh difficulties

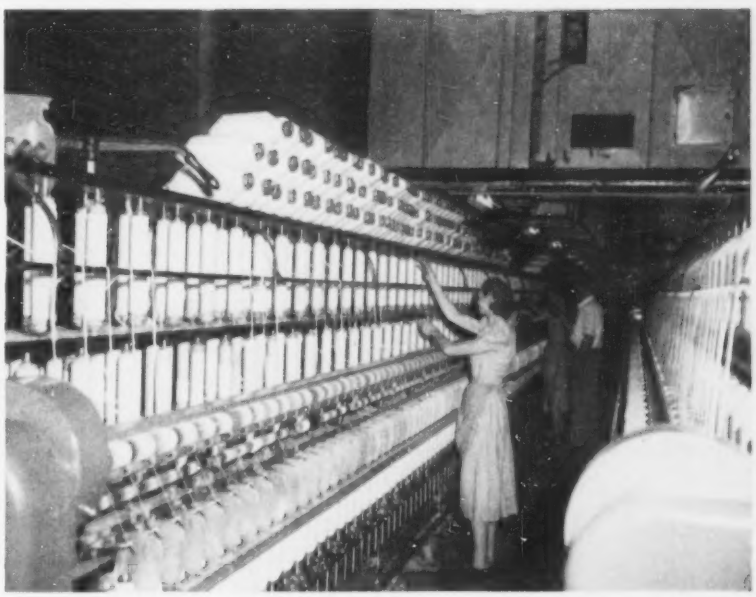
Since World War II, and particularly within the past year, a widening interest in dope-dyed synthetics has caused them to be offered by most of the major synthetic fiber producers.

To date, acetate filament and staple have made up the bulk of U. S. production of dope-dyed fibers. Recently, however, commercial production of dope-dyed viscose and Dynel has begun, in filament and staple form. Dope-dyed tow in acetate and viscose will soon be available.

Why Dope-Dyed?

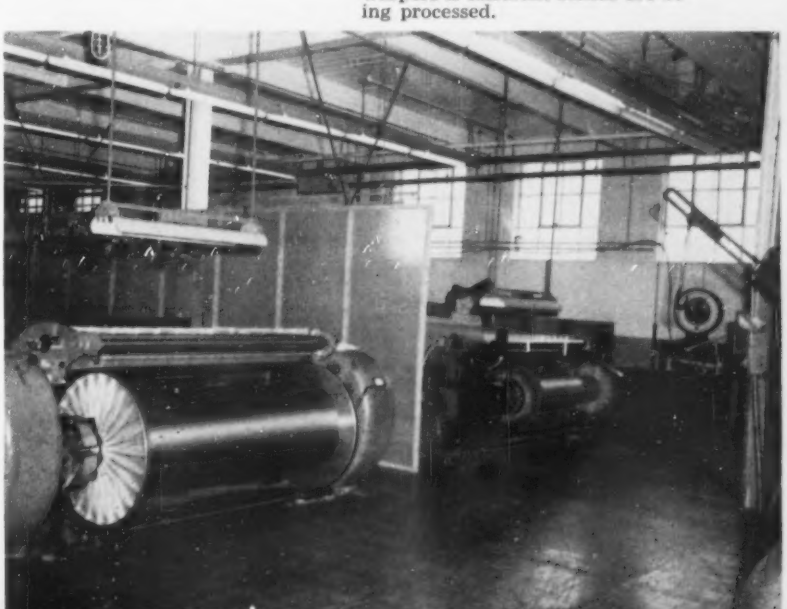
Interest in dope-dyed fabrics is centered mainly on their excellent fastness to washing, light, dry cleaning, perspiration, crocking, and, in the case of acetate, to its fastness to atmospheric fumes.

Secondary considerations are the possibilities they offer for reproducing shades exactly lot after lot, elimination of side-to-side and end-to-end shading in piece-dye-



TO REDUCE CONTAMINATION. Use cycle creeling. Creel whole frame at one time. Don't store roving on creel.

TO REDUCE CONTAMINATION. Use temporary partition between warpers if different blends are being processed.



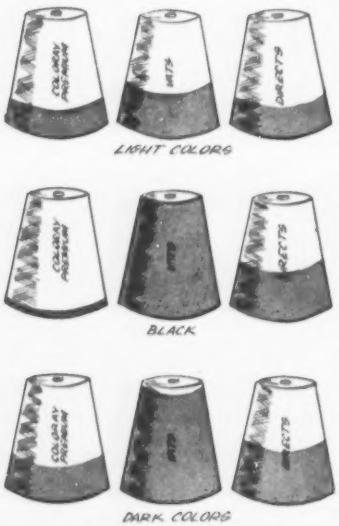
TO REDUCE CONTAMINATION. A vacuum cleaner removes fly without spreading it over the adjacent machines, especially on drawing.

ing, and elimination of damage occurring in stock or yarn dyeing. In some cases dope-dyed fibers have a cost advantage as compared to dyes *of the same fastness.*

There is another side to the coin, of course. In most cases, costs are higher for dope-dyed fabrics than for similar fabrics piece-dyed with direct dyes. Obviously, the customer must place enough value on the increased fastness properties to justify the added cost of dope-dyed fabrics.

Inflexibility of inventory is inherent with dope-dyed yarn and staple. It is in most cases impractical to change the color by over-dyeing.

Dope-dyed fibers are more difficult to process than uncolored: settings and speeds required are different in many cases; static is a greater problem; and, above all, contamination of white stock by colored fibers or of colored stock by white fibers is an ever-present danger.



PACKAGE DYEING COSTS (including winding costs chargeable to dyeing) for both vat and direct dyes are compared with the price premium for a dope-dyed fiber in the chart above. Shaded areas indicate relative costs.

Contamination

Without a doubt the foremost objection which mills make to running dope-dyed staple is the fear that white stock being run in the mill will be contaminated by stray colored fibers, and vice versa. It cannot be denied that contamination does present a serious problem, but one that is already successfully met as a routine matter in mills doing raw stock dyeing or processing fibers with radically different properties.

The keys to keeping contamination at a minimum are good housekeeping in the mill, constant supervision, and segregation of colors from each other and from white stock.

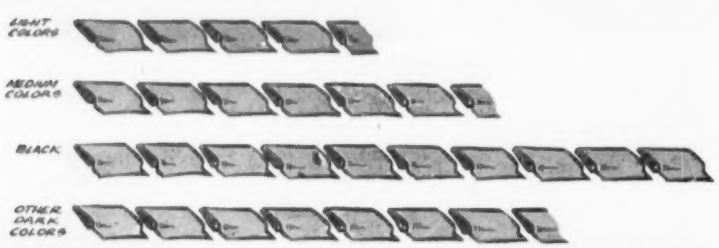
Segregation to the greatest extent possible is a "must." Where colors can not be sufficiently isolated, drop cloths or partitions between machinery may be necessary from opening through warping.

Cleanliness can not be over-emphasized. Fibers do not cling as readily to clean surfaces, and so are less likely to wind up as unwelcome but conspicuous visitors in a different-colored lot. Mills experienced in running dope-dyed staple recommend frequent vacuum cleaning as the best method for collecting stray fibers from machinery.

Re-circulated Air Systems are a major source of contamination. When running dope-dyed staple, it may be necessary to block off sections of the system, close some of the vents, or even shut off the fans entirely.

Overhead Cleaners should never be used where colored stock and white stock, or different colors, are run in the same room. Their use will make contamination almost impossible to control.

Processing Sequence. The chances of contamination are less when colors are processed in an orderly sequence, i.e., never follow white or light colors by dark colors, or vice versa. Colors which



SAVING to be derived by using one dope-dyed fiber instead of piece-dyeing fabrics with vat colors is indicated here. Each bolt represents one cent per yard.

U.S. Manufacturers and Number of Colors Available in Dope-Dyed Yarn and Staple

Company	Trade Name	Acetate		Viscose		Dynel	
		Filament	Staple	Filament	Staple	Filament	Staple
American Enka Corp.	Jet Spun	—	—	12	—	—	—
American Viscose Corp.	Colorspun	0	0	0	0	—	—
Carbide & Carbon	Color-Spun	—	—	—	—	—	8
Celanese Corp.	Celaperm	19	—	—	—	—	—
Courtaulds, Inc.	Coloray	—	—	—	13	—	—
E. I. Du Pont & Co.	—	3	—	—	—	—	—
Tennessee Eastman	Chromspun	19	9	—	—	—	—

0 indicates information requested but not furnished by manufacturer.

Price Premiums for Dope-dyed Yarn and Staple*

	Filament		Staple	
	Black	Colors	Black	Colors
Acetate	15c	35c	20c	25c
Viscose	0	35c	3c	5c-22c
Dynel	—	—	22c	22c

*Over white (bright) filament and staple; yarn in same put-up.

0 indicates information requested but not furnished by manufacturer.

when mixed appear to give solid colors should follow each other through the mill. A desirable order is blue, green, yellow, orange, red, purple, and then blue again.

Contamination is less apparent in fancy weaves and rough textures, for example in bark cloth for draperies, than in plain weaves and flat fabrics. Blends of colors are also less likely to show contamination than are solid shades. For this reason, some mills use dope-dyed staple only in color blends.

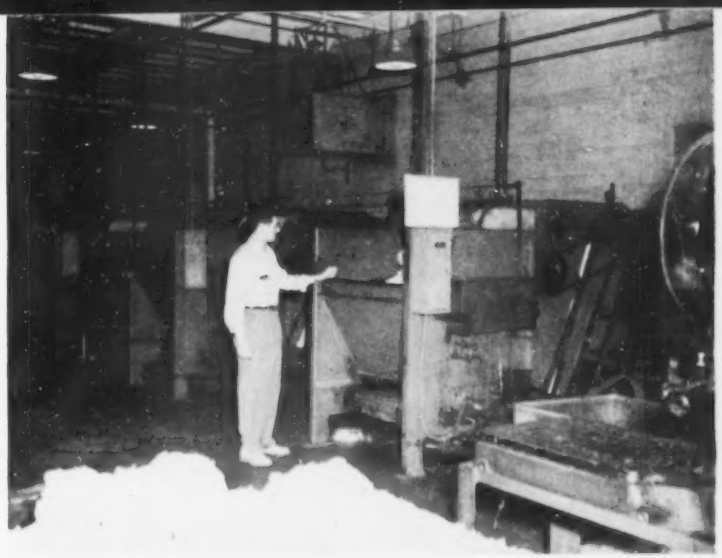
Opening and Picking

A separate opening and picking line should be used for colors, if possible, and if the line is not sufficiently isolated some mills feel it necessary to use drop cloths or erect a partition. If a separate line cannot be used, some white stock or waste should be run through to wipe the machinery before changing back to white. Colored waste can of course be used in the same way, preceding stock of the same color.

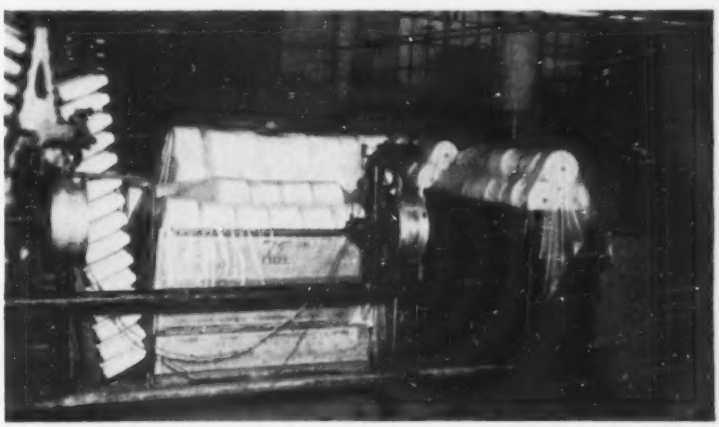
Apply Anti-Static Agent. Since dope-dyed fibers, particularly in darker colors, are more affected by static electrification than is white stock, it is important to apply an anti-static finish or to oil the stock. For the same reason, the hydrophobic fibers, such as nylon, Dynel, Orlon, and Dacron, are more susceptible to contamination by fly from dope-dyed staple than are the natural fibers, rayon, and acetate, since their higher static charge attracts and holds stray fibers.

Reduce Lap Weight. Laps of colored stock are bulkier than white, so some mills reduce lap weight when running dope-dyed. One mill cut the weight of its laps from 51¾ pounds to 40 pounds. Laps should be wrapped in paper to avoid contamination of other stock by pieces dropped in transit. Laps of each color should be stored separately.

Paint Pickers. It is recommended that the inside of pickers be kept painted, for better visibility in cleaning and because fibers stick less readily to painted surfaces. One mill paints the inside of its

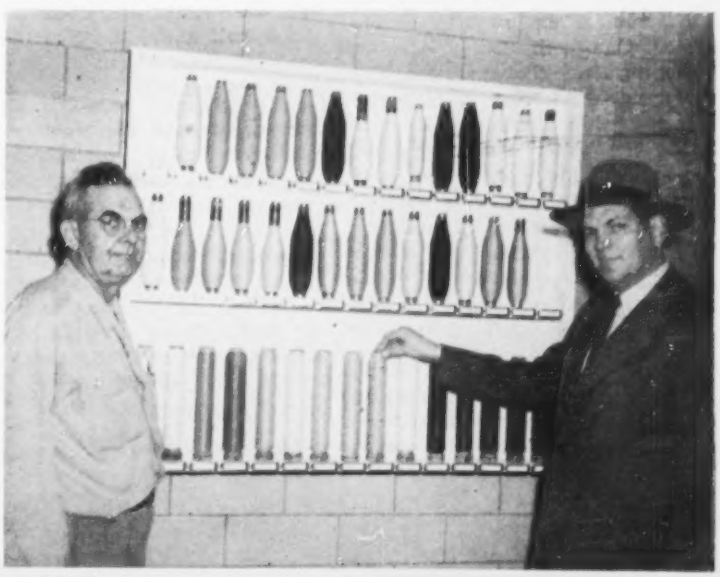


WHEN TO PRE-BLEND. A range of unusual effects or solid shades can be produced by using dope-dyed staple in blends. If 5% or less of a component is used, a pre-blend is recommended.



COVER TRUCKS when holding roving or yarn in storage or awaiting transfer from one department to another.

VISIBLE IDENTITY RECORDS. Board in superintendent's office holds bobbin of each type of yarn currently in production; gives markings which identify blend and lot numbers.



Precautions for Mills Planning to Run Dope-Dyed Staple

Don't expect to run dope-dyed without extra cleaning of machinery. Vacuum cleaning is advisable.

Don't *run different colors on adjacent machines if it can be avoided; but when it is necessary, use drop cloths to block off colors from each other.*

Don't fail to examine recirculated air systems as a possible source of contamination.

Don't *use overhead cleaners where colored stock and white stock, or different colors, are run in the same room.*

Don't fail to process colors in an orderly sequence: never follow light colors with dark, or vice versa.

Don't *use the same opening and picking line for dope-dyed and for white stock, if it can be helped.*

Don't process dope-dyed staple without applying either oil or an anti-static finish.

Don't *strip cards less than three times per 8-hour shift. When changing colors, strip, run flats around one circuit, and restrip.*

Don't use same twist multipliers at roving and spinning as for regular rayon or acetate, TM's must be increased from 3 to 10 per cent. Settings should be ⅛-inch wider in drawing and roving, 1/16-inch wider in spinning.

Don't *run travelers as fast in spinning dope-dyed staple. 4500 feet per minute is the maximum speed recommended for 18s and finer.*

Don't use same slasher size formula as for white yarn. Increase formula strength 8 to 10 per cent.

Don't *permit stretch at slasher to exceed 3 per cent.*

Don't let waste get mixed. Mixed waste has considerably less value than waste which is kept segregated.

pickers once a year with Saco-Lowell blue-gray paint.

Carding

The surface properties of dope-dyed fibers are different from those of white fibers, causing them to card and draft differently, probably as an effect of the coloring pigments used. Card settings are more critical for dope-dyed staple than for white stock, and the same settings are not equally successful for different colors. When first running a new color, a mill will have to experiment to determine the best settings.

Extra Stripping and Cleaning are advisable when running dope-dyed. One mill using vacuum stripping found that shortening the stripping cycle from twice per 8 hours to three times per 8 hours made for better running work. When changing colors, the card should be stripped, run without stock for one circuit of the flats, and then the cylinder and doffer restripped. Care should be taken to remove the front and back waste from under the card.

Reduce Production. It may be necessary to reduce sliver size and carding rate to insure smoothly running work. At one mill, operation was greatly improved by reducing sliver weight from 60 to 55 grains, and production from 14 to 10 pounds per hour.

Drop Cloths. The use of drop cloths to segregate cards running dope-dyed stock from those running white stock is recommended by most mills. However, some mills experienced in running colored stock never use drop cloths except in spinning.

Drop cloths are usually of plastic, although burlap and sheeting are sometimes used. One mill uses plastic shower curtains as drop cloths. These are hung on wires, with their lower edge about a foot and a half above the floor. They are easily pushed out of the way when not needed.

Drawing and Roving

To minimize contamination, draw frames and roving frames running the same color should face each other. Again, it may be sometimes necessary to use drop cloths. Occasionally it is necessary to run two colors on the same roving frame. If so, a shield of plywood or other convenient material should be attached to two idle spindles between the colors.

Mechanical Changes. A slightly higher roving twist multiplier and wider settings in drawing and roving are necessary for dope-dyed stock. For example, one mill uses ⅛-inch wider settings on the Saco-Lowell FS-1 and Whitin Super Draft roving frames, and increases the 0.90 TM it used for regular roving to 1.0 TM for dope-dyed acetate roving. With rayon twist, there were too many roving breakbacks in spinning.

Roving ends-down will be higher than normal with dope-dyed staple in dark colors. One mill had 15-20 ED/TSH on regular stock, 20-25 ED/TSH on dope-dyed acetate staple, both on 3.50 hank roving.

Cleaning. The calender roll covers of drawing frames should be kept clean, the clearers picked, and all adhering fiber removed from the spoons and sliver guides.

Roving frames should be kept clean in general, particular attention being paid to the top and bottom clearers, flyers, and lifter rolls. Stored roving should be protected from fly.

Spinning

In addition to the precautions taken in any mill, only a minimum of roving should be stored on the creel, so that fly has as short a

time as possible to settle on it. Trucks should be covered when holding yarn waiting to be taken to the winding room.

Cycle Creeling, i.e., creeling the whole frame at one time, is recommended by some mills experienced in colored work. The frame is thoroughly cleaned between cycles. Spinners' work loads may be increased up to 6 more sides per spinner when cycle creeling is practiced.

Drop cloths may be necessary when different colors are run on adjacent spinning frames. Traveling cleaners should never be used when running colored stock and white stock, or different colors, in the same room.

A higher ends-down rate must be expected with dope-dyed. The experience of one mill with 25s and 30s yarn was that ends-down for dope-dyed acetate were 30-40 ED/TSH, compared to 20-30 ED/-TSH for regular production. Dark colors will have a higher rate, consequently this mill reduced spinners' work loads to 12 sides on dark colors, compared to 14 sides on white or light colors (spinners do no cleaning).

Mechanical Changes. More open roll settings and higher twist multipliers are recommended when running dope-dyed. The practice at one mill is to use 1/16-inch wider settings on Z-2 and F-2 drafting systems, and to increase TM's about 3 per cent over those used for regular yarns. This helps to compensate for the slightly decreased strength of dope-dyed yarns compared to regular yarns, and to reduce ends-down.

Traveler Speeds. As with any colored stock, traveler speeds must be reduced to prevent excessive ends down when running dope-dyed. The maximum speed recommended is 4500 feet per minute for counts of 18s and finer.

Dope-dyed acetate has been found to run well in the spinning room at relative humidities of 50 per cent for long-draft and 60-65 for conventional spinning.

Twisting-Winding-Warping

Drop cloths are sometimes advisable in twisting, winding, and warping. When two colors are run next to each other in a winding operation, shields should be placed between them.

Contamination from fly at the warpers can be considerably reduced by vacuum cleaning the warper creel after each beam.

Slashing

Dope-dyed yarns are fuzzier than regular yarns and take up size less readily, so the strength of the size formula should be increased about 8 to 10 per cent.

To insure good-running weaving, stretch at the slasher should be reduced from the usual 6-8 per cent to 2-3 per cent for dope-dyed staple yarns.

Weaving

Little difficulty should be met in weaving dope-dyed staple yarns. Contamination can occur in weaving, but is less serious than when stray fibers have been spun into the yarn. Careful burling is always necessary.

Waste

Disposal of waste is one of the most important points to be kept under control in a mill spinning any colored stock. In particular, no waste should be fed back into production without adequate check on its freedom from contamination. Clearly marked receptacles should be arranged for waste throughout the mill.

Blending

It is possible to blend different dope-dyed colors or dope-dyed fibers with white fibers in various percentages to obtain a multitude of shades and tints in unusual and novel effects. Solid - appearing shades can also be produced if care is taken in choosing colors for blending.

COLORAY BLENDING CIRCLE. For solid colors, blends of Coloray should be made of colors near each other on the circumference, and equal distances from the center.

The color blending circle in the accompanying illustration is a reliable guide to the degree of solidity of color which will be obtained by blending two Coloray viscose staple colors together. In order to obtain maximum solidity of color, blends should be made from pairs of colors which are as near to each other as possible on the circumference of the circle, and as nearly as possible equal distances from the center of the circle. For example, Indian Yellow and Pink will blend in various proportions to give a range of apparently solid orange colors.

For solid effects, the colors blended must also be near to each other in brightness, and fine denier fibers will give a more solid-appearing blend than do coarse denier fibers. In general, coarse denier fibers appear darker and brighter than fine denier fibers in the same color.

Different Fiber Blends. Blends of dope-dyed staple with cotton, wool, and synthetic fibers present no unusual difficulties. In blends with cotton, a more intimate mix is made if the blending is done before carding, but at some sacrifice of yarn quality. For many end uses, blending at the first of three processes of drawing is most acceptable. In any case, neps in the cotton will be accentuated by the colored background.

On the Worsted System, recombed blends with dope-dyed staple are best, but adequate results can be obtained by carding the dope-dyed stock separately, blending with combed wool top at a gill box, regilling, and then combing on the Noble comb.

On any spinning system, the fact that early blending produces greater quantities of low-value colored waste must be considered.

Automatic weighing devices are satisfactory for blends, provided they are checked frequently. If as little as 5 per cent of one component is required, a pre-blend is advisable.

Color matching of blends is best done by weighing out the compon-

Other Comments on Dope-Dyed

By A Mill Superintendent

A mill superintendent with wide experience in running both staple and filament dope-dyed was shown this article before publication. He confirmed most of the observations reported as being parallel to experience in his own mill, but had several comments to make on specific points. His remarks follow:

Speeds. We agree that the speeds of various machines must be reduced when a mill first starts to run dope-dyed, as must be done when any unfamiliar fiber is first introduced. However, as mill personnel become experienced with the new fiber, speeds can usually be increased, often back to the standards used with regular stock.

Ends-Down. In addition to the points you have listed, it is our experience that keeping your roving flyers free of nicks and burrs will reduce ends down. All bobbins, quills, etc., must be kept smooth to keep end breakage at a minimum in further processing. Incidentally, we use bobbins, quills, and other packages for only one color as much as possible, to reduce contamination. We clean them thoroughly when we do change colors.

We can't agree that spinners' work loads should be reduced when ends-down seem excessive. If it comes to a choice, we prefer to cut speeds. Cost-wise, the results will be about the same; and, more important, the bad psychological effect of reducing work loads, only to raise them again later, points to the advisability of exhausting other means for getting ends-down at an acceptable level before tampering with work loads.

Filament. We keep our quills smooth when running dope-dyed filament by dumping some starch into the quill bins. The starch has enough abrasive action to polish the quills as they are tumbled around in it. The starch has the added advantage of filling the grooves at the ends of the quills, preventing the filaments from catching in them. These grooves are not smoothed out when the quills are rubbed with emery cloth or Crocus cloth.

Mis-reeds are difficult to see in weaving dope-dyed filament yarns. We inspect continually for them; all our weavers have flashlights to help in inspection.

Sloughing of filling yarn can be reduced by increasing the stroke in quilling. This applies to both spun and filament yarns, although the increase is less for spun.

Be sure that harnesses and reeds are thoroughly cleaned after a warp is cut out.

ents of the blend on a balance or grain scale, carding the mixture on a pair of hand cards, and hand spinning about four inches of yarn from the blend. Staple over two inches in length should be cut before weighing and hand carding.

Dyeing

Dope-dyed fibers can be used in the usual cross-dyed combinations, provided that it is realized that the dyeing and other chemical properties are the same as for white fibers. For example, dope-dyed acetate can't be used in fabrics to be vat dyed — surface saponification of the fibers will cause them to dye. However, neutral cross-dyeing with viscose, cotton, and nylon can be done successfully without staining the acetate.

Unusual effects can be obtained by blending dope-dyed and white staple, and then piece-dyeing to color the white fiber.

It is possible to over-dye the dope-dyed fibers in the piece, with the usual reservations on dark colors. The "graveyard of dyer's mistakes" — putting it into a black — may sometimes be used to work off an inventory of a color which has lost popularity.

Planning

The scheduling of different colors in the mill is a crucial point, both from a sales and a production standpoint. Frequent change-overs from white to dope-dyed, from dope-dyed to white, and among colors, are disruptive to work loads, increase manyfold the dangers of contamination, and cause costs to soar.

While it is almost impossible to schedule long runs on one color, it is vital that the sales and production staffs cooperate to keep change-overs at a minimum.

Filament Yarn Weaving

Set marks and broken picks are the difficulties most often met in weaving dope-dyed filament yarns. Set marks can be virtually eliminated by having the whiproll so positioned that tensions on the top and bottom sheds are equal (see TEXTILE INDUSTRIES, July, 1953, pages 96-98).

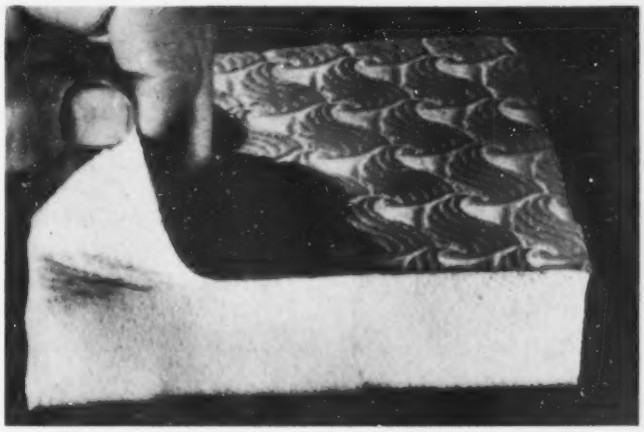
Tension in Shuttle. To minimize broken picks, tension on the shuttle eye must be carefully controlled. One mill running 100- denier dope-dyed acetate has had good success with 15 grams tension on the shuttle eye. Regular checks of filling tension are recommended, preferably with a tension meter. Checks should be made of the tensions of both right-to-left and left-to-right picks.

Quill Treatment. Dope-dyed filament rayon and acetate are even more susceptible to broken picks caused by rough quills than are white yarns, making perfectly smooth quills a vital necessity. At one mill, the finish is removed from all new quills with 00 emery cloth, they are rubbed smooth with Crocus cloth, and then Simonized. This is repeated about every two months.

Loom-Finished Fabrics

As the name implies, loom-finished fabrics are ready for the cutter as they leave the loom, require no further finishing. The warp for these fabrics is sized with a synthetic resin, such as Stymer LF, Elchem 1273, or Polyco 497, giving a fabric resistant to water spotting and which is dry cleanable. Mill experience to date has been confined principally to filament acetate yarns.

Since loom-finished fabrics bypass finishing, they must be in perfect condition. There is no provision for scouring out mill stains. More than ordinary care is required



Cushion Backing for Textiles Can Be Produced and Molded Continuously

Soft, flexible foam that breathes can be produced and molded continuously as a cushion backing for textiles and other materials by a new method employing plastisols based on Bakelite vinyl resins. Continuous process equipment and plastisol solution developed by Elastomer Chemical Corp., Newark, N. J., produce a cured foam that is easily fabricated.

The foam breathes because the gas mechanically mixed with the plastisol produces interconnecting cells uniformly distributed in molded tubes, blocks or rolls eight inches or more in thickness. Subjected to a gas flame, it scorches under the flame but is self extinguishing when the flame is removed.

Continuous foam sheets of almost any thickness and widths up to 60 inches are cured in high-frequency dielectric ovens and molded at the same time directly to natural or synthetic textiles, Krene vinyl film and sheeting, and other materials. The continuous foaming equipment meters the plastisol and a gas accurately and simultaneously into a mixing head and discharges continuously at rates up to 1,000 pounds per hour. Easily controlled variation of the plastisol formulation, or the foaming or molding technique alters tear strength, elongation, chemical resistance, and other properties over a wide range.

The long wearing, non-hardening, and non-oxidizing qualities of the cured foam are due to the resistance of Bakelite vinyl resins to abrasion, moisture, acids, alkalies and most chemicals.

to maintain perfection through quilling, slashing, weaving, and other handling operations.

Slashing

The resins used for sizing loom-finished fabrics are insoluble in water, but can be readily dissolved in dilute alkalis or ammonia. For sizing dope-dyed yarns with Stymer LF, about 12 per cent of ammonium hydroxide, 26° Be., on the weight of the resin is used. A suitable softener is also included in the size formula. Size box temperatures should be between 120 and 130 F.

The size is prepared by heating two-thirds of the water required, to 160 F, adding the ammonia, and then pouring in the resin with agitation. The size is cooked for the recommended period (30 minutes at 160 F for Stymer LF), the softener added, and the mixture brought to volume.

Slasher speeds of 25 to 40 yards per minute are recommended. Warps should be thoroughly dried to drive off all the ammonia.

The accompanying fiber and slashing specifications represent the current practice of a large producer of loom-finished fabrics.

Acetate and Viscose Novelty Fabric

Warp: 75-denier bright acetate
Filling: 200-denier thick-and-thin viscose
Size formula, per 100 gallons:
47 lb Stymer LF
5 lb NOPCO-1440 (softener)
6 lb ammonia, 26° Be.
Size box temperature: 125° F
Can temperatures:
1 - 180°
2 - 185°
3 - 190°
4 - 195°
5 - 195°
6 - 195°
7 - cold
Slasher speed: 35 yards per minute
Stretch: 6½%

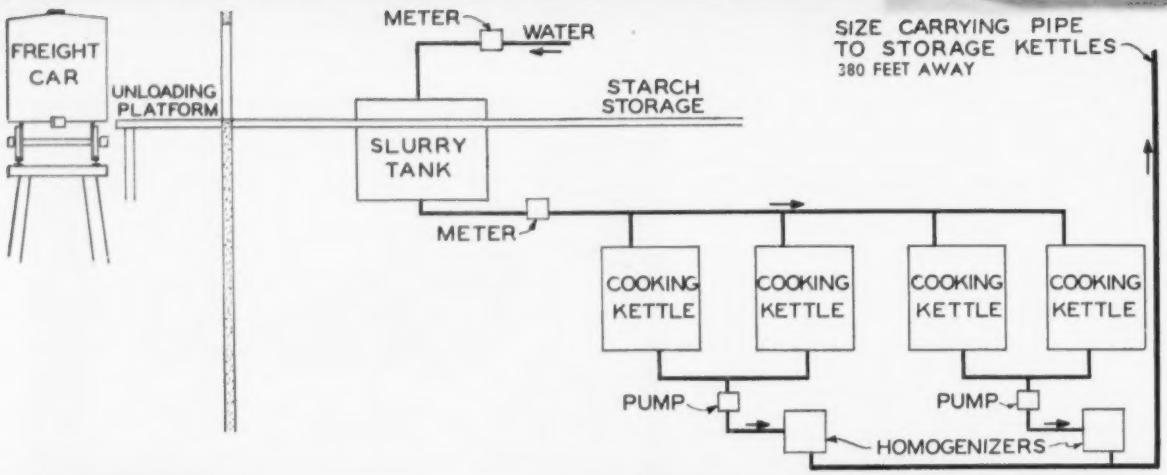
Fancy Acetate Fabric

Warp: 100-denier Chromspun
Filling: 150-denier Chromspun
Size formula per 100 gallons:
55 lb Elchem 1273
6 lb NOPCO-1440 (softener)
4½ lb ammonia, 26° Be.
Size box temperature: 125° F
Can temperatures:
1 - 160°
2 - 160°
3 - 160°
4 - 190°
5 - 210°
6 - 170°
7 - Cold
Slasher speed: 40 yards per minute
Stretch: 6½%

ACKNOWLEDGMENT

In addition to information secured from mills visited by the staff, parts of this article are abstracted from a paper, "The Technique of Using 'Coloray,'" presented by Geoffrey V. Lund, Courtalds, Ltd., before a meeting of the American Association for Textile Technology, and a paper, "Solution-Dyed Staple," presented by W. W. Bowman, American Viscose Corp., before the Annual Alumni Conclave, North Carolina State College School of Textiles.

The editors credit J. L. Brannan of Rock Hill, S. C., and many other mill officials and technicians for their assistance in preparing this article, and for permission to photograph existing processing aids.



1. STARCH IN BAGS is unloaded from freight cars onto this platform and stored inside mill near cold slurry tank (shown in Photo 2).

2. COLD SLURRY TANK holds 2,000 gallons of mix (starch and water) which is constantly agitated by the 15-hp motor-driven stirrer.

Pacolet Pumps Size 380 Feet

Starch storage facilities permit use of cold slurry

Staff Prepared

EXCLUSIVE

PACOLET Manufacturing Company, mill No. 4, New Holland, Ga., has installed new warp size preparation equipment and located starch storage facilities to permit the use of a cold slurry. A cold slurry tank is fed from the starch storage room. Size cooking equipment was moved from the slasher room into the boiler room and the cooked size is now delivered 380 feet through pipes to size storage kettles located in a room adjacent to the slasher room.

Size Cooking Remote from Slashers. There are four cooking kettles and two homogenizers in the boiler room. On demand, the cooked size is pumped to the homogenizers which operate at 2000 pounds pressure. The homogenizers permit savings in that pearl starch is now used instead of thin boiling starch, and cooking time is reduced to 20 minutes.

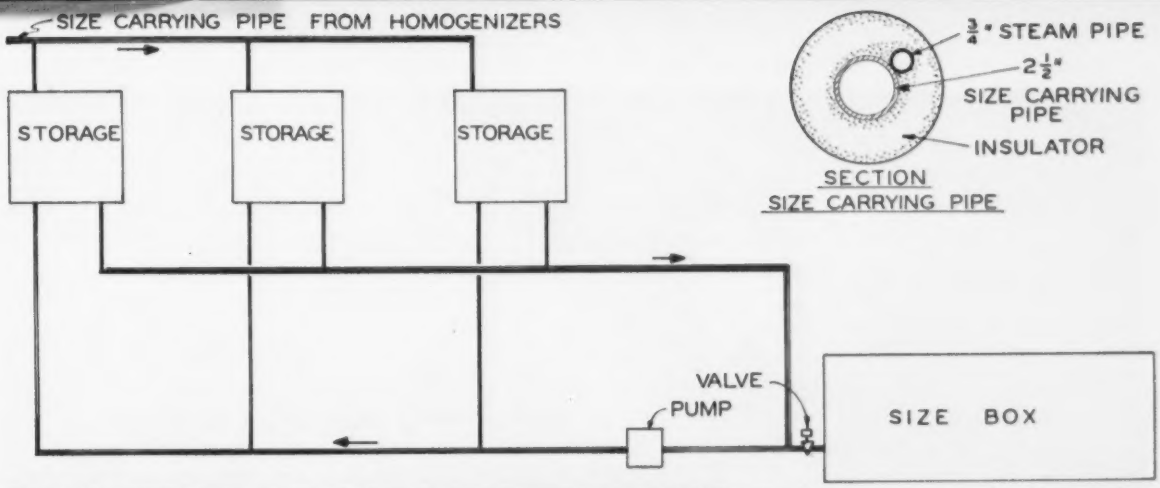
After homogenizing, the size goes 380 feet directly to three size storage kettles, each holding 400 gallons. The size line to the storage kettles holds 85 gallons of size and is heated by a companion (steam) line, and both pipes are wrapped with insulation to prevent heat dissipation and attendant size coagulation. The size reaches the storage kettles at higher temperature than it left the homogenizers (about 205 F).

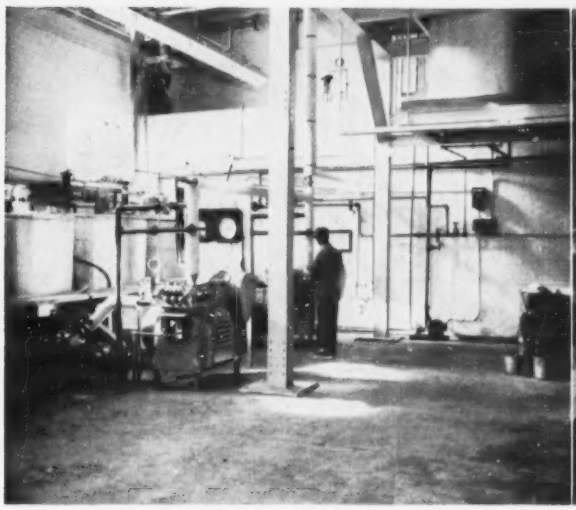
One red and one green light at cooking kettles indicate safe level of size in storage kettles.

On weekends, most of the size is pumped to the size box out of the lines. Then steam is employed to clean the pipe lines to prevent formation of size deposits.

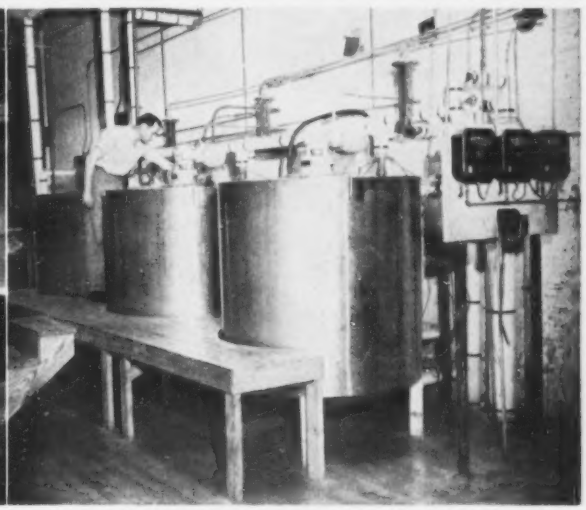
Size is circulated in the storage kettle circuit which by-passes the size box when the size box valve is closed. Level controls in the size box regulate the valve and demand at that point.

Cold Slurry Saves Time. The pres-





3. SIZE IS COOKED in these storage kettles (located in boiler room), homogenized, and pumped to storage. Note bottom of cold slurry tank at upper right.



4. SIZE TRAVELS 380 FEET via steam-heated pipe (see details in drawing above) to these storage kettles located in room adjacent to slasher room.

ent procedure is to mix 1000 gallons of cold slurry containing starch and water which is constantly agitated in a tank located on a mezzanine level in the boiler room. From here the slurry is transferred by gravity and metered flow to the cooking kettles, also located in the boiler room. 105 gallons of cold slurry are put into each kettle; then 105 gallons of cold water are added; then 34 pounds of compound. The formula is cooked with live steam to finish 265 gallons of size which is brought to 210 F in 15 minutes and held there for 20 minutes.

Formerly, all ingredients of the size formula were added to the mix one at a time in each of the cooking kettles.

This mill now maintains more nearly constant size viscosity than was possible before the present equipment was placed in operation.

More Beam Storage. The space formerly used in the slasher room for a two-day supply of starch is now used to store section beams. These beams were formerly stored in the basement and brought back to the slasher room as needed. The warper room is located adjacent to the slasher room.

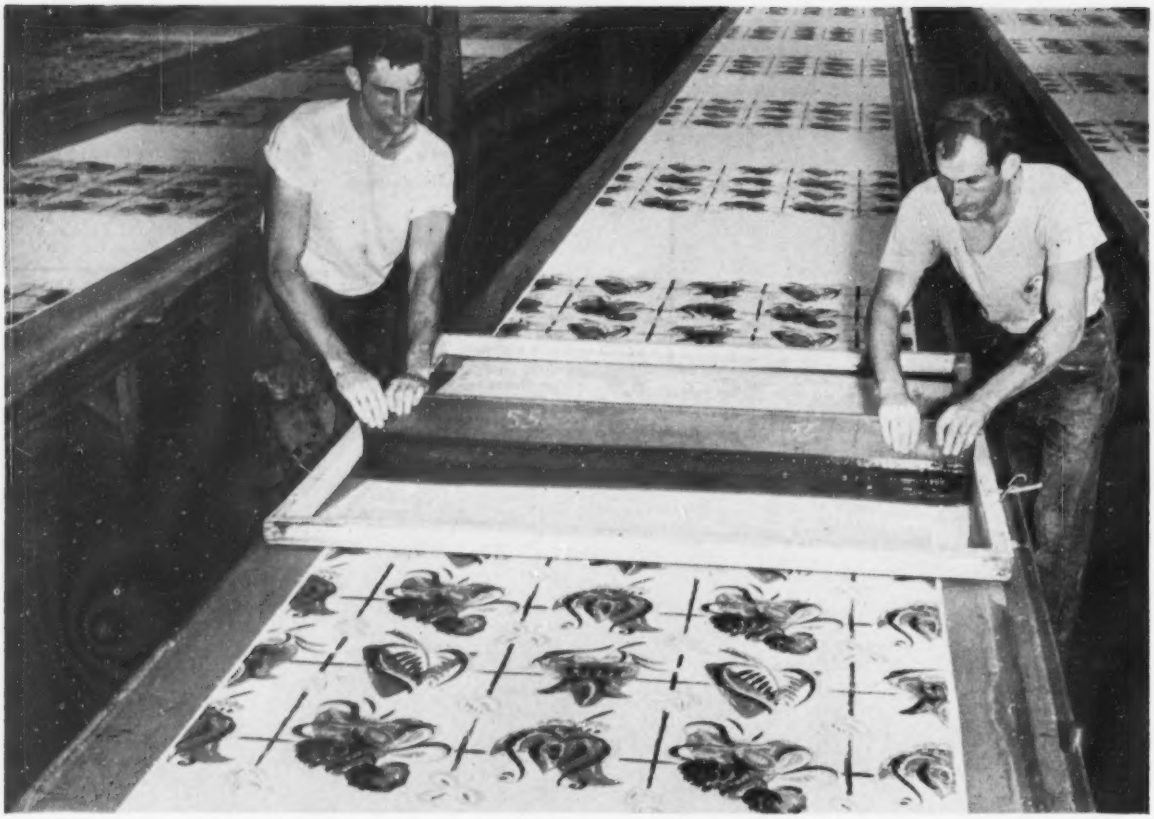
Labor Saved. Relocating a large part of the size preparation equipment in the boiler room was contemplated to coincide with a boiler changeover to natural gas. The aggregate advantage of boiler changeover and size preparation equipment changes and relocations permit saving the labor of one man on each shift in that one man can attend to both size preparation and boilers, when the boilers are on natural gas. Neither of these tasks is a full-time job in view of the automatic operation of boilers and semi-automatic operation of size preparation equipment.

Materials Handling Improved. A starch handling problem was solved by unloading bags of starch from a freight car onto a platform adjacent to a room where the starch is stored until needed for the cold slurry mix. The platform and storage room were built for the purpose and utilize space at mezzanine level in the boiler room.

Formerly starch was unloaded from freight cars at the west end of the mill where it was stored on a platform covered by a tin roof. These bags of starch were trucked as needed to the east end of the mill and to the second floor. When the weather was bad, it was necessary to transport the starch through the mill.

There was only enough storage space in the slasher room for a two-day supply of starch, and every two days more starch had to be brought in.

The size compound was unloaded at the east end of the mill and had to be brought up two stories — one barrel at a time. Compound is now unloaded and stored at the cooking kettles. An unloading ramp was built for the purpose at this location.



NOTE ABSENCE OF PINS at the selvages of this table cloth pattern. Adhesion quality of the paraffin coated table permits working of the screen while fabric rests undisturbed. Rapid, precision printing resulting from this method of fabric spreading has lowered costs, improved quality.

How Castle Creek Does

Precision Screen Printing

Soft, pliant bed of wax on printing table
provides smooth surface
for uniform and positive results

Staff Prepared

EXCLUSIVE

NEW TECHNIQUES in cloth spreading on print tables have accelerated screen printing operations at Castle Creek Prints, Inc., of Washington, N. J. Instead of pinning cloth to the tables, this mill lays the fabric on wax coated surfacing which is sufficiently tacky to establish a firm, flat, and immobile laminate.

By means of a specially designed, portable cloth spreader, cloth is deposited along the table as fast as the two operators who guide the spreader can walk down the aisles. One of the spreaders employed for tablecloth weight fabrics merely lays the goods onto the table where the fabric's own weight causes it to adhere to the wax. However, another spreader

Study of Fabric Uniformity from Top Blending of Wool with Rayon or Nylon

Research to determine the uniformity in blends of wool with nylon or rayon in fabrics made of fine rayon or nylon staple fibers (3 denier) mixed with coarse (48-50s) and medium (56-58s) wool is described in the November, 1953, issue of "Textile Research Journal"*.

A count of the individual fibers in yarns taken from eight finished whipcord fabrics provided the data for appraising this uniformity. Chemical analyses of the fabrics were made in order to compare the composition with the manufacturing specifications and to evaluate the accuracy of the results obtained by the fiber count method.

These conclusions were drawn as a result of the study:

(1) Wool rayon and wool-nylon fabrics made by blending tops through two gilling and four drafting operations give materials of satisfactory uniformity.

(2) When the diameter and density of the fibers in a mix vary, the percentage composition by number of fibers will differ from the percentage by weight. The fabrics which were 50-50 by weight proved to be 40% nylon or rayon. In each case the percentage of the coarser fiber is decreased, and that of the finer fiber increased. This increase in the relative number of the finer fibers will affect the dyeing and finishing processes and also the appearance and feel of the finished cloth.

(3) The composition by number of fibers as determined by count can be changed to a weight basis. The data thus obtained agree with the results of potassium hydroxide analysis and the manufacturing specifications.

(4) Analysis by counting fibers requires only a very small sample (approximately 500 fibers) of material in comparison with potassium hydroxide method. Another advantage is that microscopic examination will detect local concentrations of one of the fibers not evident when analyzed by chemical methods — an important factor in determining uniformity of blends.

*"Fabric Uniformity from Top Blending of Wool with Rayon or Nylon," by Alfred R. Macormac and Harriet Harvey Reed of Bureau of Human Nutrition and Home Economics, Agricultural Research Administration, U. S. Department of Agriculture.

used for dress goods that ordinarily require fine registration of pattern is constructed so that the weight of the spreader itself bonds the fabric to the table.

Constructed by machine shop personnel of Castle Creek, this last spreader is a model of simplicity and ingenuity. Its frame work is all welded angle-iron. The device straddles the table (60" wide) and rolls on casters resting on the floor. When loaded with a roll of cloth and positioned for a spread, the caster wheels are retracted off the floor by means of a lever operating a toggle linkage. The entire weight of the unit then rests on two eight-inch diameter rollers in contact with the table.

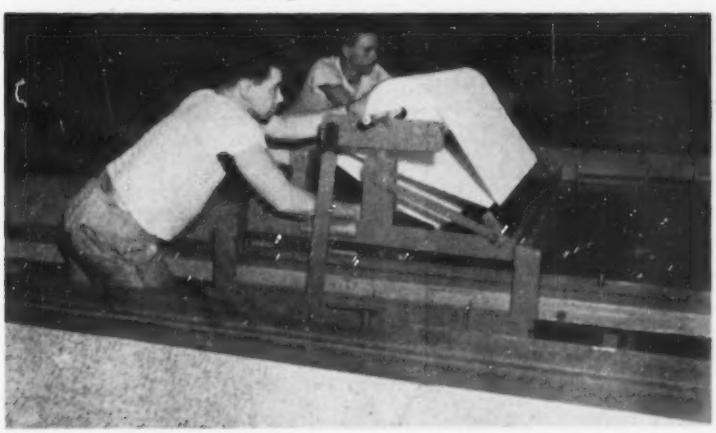
Since the cloth passes beneath these two rollers, it is pressed securely onto the waxy adhesive. Guiders keep the cloth at full width. The spreader is then rolled down the length of the 60-yard print table, unwinding as it is pushed along.

This insures precision printing and supercedes the pinning method used in many screen printing plants. Even after the screen is lifted up after print paste is squeezed on, there isn't the slightest evidence of cloth peeling from the table. This type of dislocation, though not too damaging in the case of table cloths involving unit registration, can be ruinous with yard goods where fine registration is critically important.

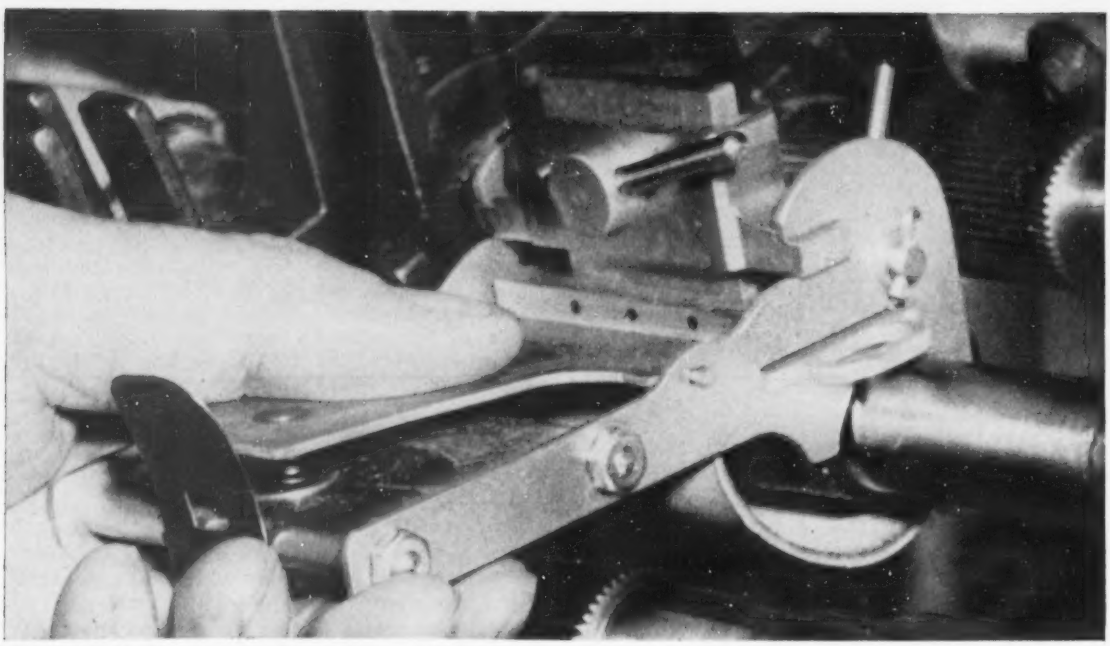
The wax does not affect the Vinyon screen material, the insoluble paint on the screen, or the printing dyes used. Supplied by Kronner Laboratories to Castle Creek specifications, the wax is stable at temperatures encountered in the print plant. It is applied once weekly to all eight tables at Castle Creek.

One of its outstanding virtues is the soft, pliant bed the wax provides for fabric. A smooth and positive printing job results under these ideal conditions.

SPREADER is rolled down the 60-yard print table, unwinding the cloth as it is pushed along.

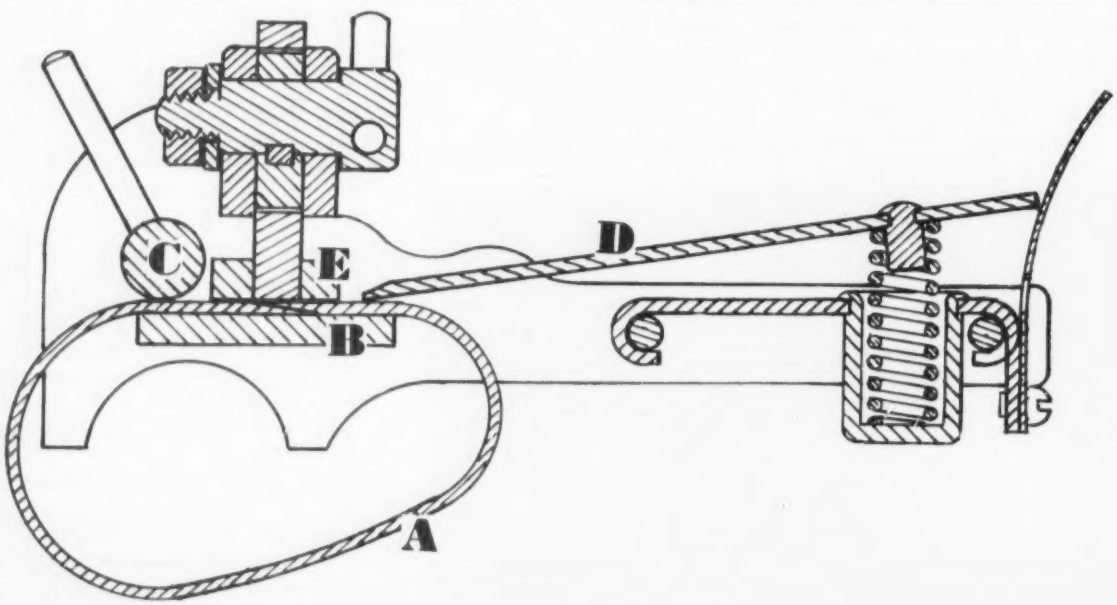


Try This Apron Splicing

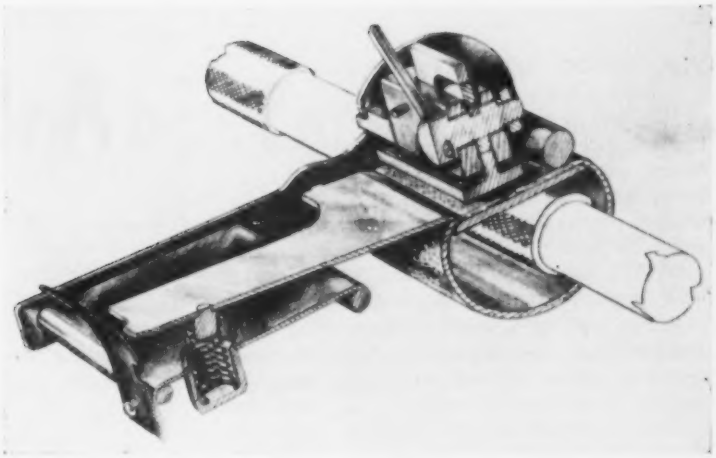


SPLICING JIG in use to replace apron on spinning frame.

FIG. 1. Apron splicing jig showing: A, apron; B, plate; C, eccentric bar; D, spring clamp; E, pressure device.



Jig



An easy-to-use jig for holding the apron ends in alignment and applying pressure to the glued area while splicing the apron directly on the spinning frame.

By George A. Pettit
*Southern Regional Research Laboratory**
New Orleans, Louisiana

EXCLUSIVE

THE MAJORITY of modern long draft cotton roving and spinning frames use aprons in the drafting system. The aprons may be endless synthetic material, replaceable by partially dismantling the roll assembly, or they may be split leather aprons that are installed with a glued, lap-joint splice. In either case, the aprons perform the important function of providing yielding and slightly gripping surfaces for controlling the fibers during drafting. Any imperfections that prevent uniform pressure and fiber control detrimentally affect yarn uniformity and, in severe cases, cause an increase in ends down.

When replacing leather aprons the necessity for making a smooth, even, and pliable splice is evident. To meet this need, a small jig for holding the apron ends in alignment and applying pressure to the glued area while splicing the apron directly on the spinning frame has been developed by engineers at the Southern Regional Research Laboratory. The jig is simple and easy to use. It is readily adjusted preparatory to making the splice and quickly detached after the splice is completed, enabling new aprons to be speedily and efficiently installed.

The general design of the jig is shown in the accompanying illustrations. To operate, one end of apron (A) is clamped against plate (B) by an eccentric bar (C) in Fig. 1. Adhesive is applied. The other end of the apron is then passed around the bottom roll and properly aligned to form an even splice. Spring loaded plate (D) is triggered to snap shut and hold this end of the apron. Uniform pressure is applied directly on the lap-joint by a pad which is held by a cam-and-lever arrangement (E) until the adhesive sets — a matter of moments — and then the clamps are released, plate (B) is slipped out of the apron, and the jig is removed. The use of two jigs allows an operator to put on one apron while another is drying without loss of time.

Experience at the Southern Laboratory for the past year has shown that the jig materially reduces defective splices, uneven running aprons, and similar difficulties. Full engineering details of the device are available from Southern Regional Research Laboratory, 2100 Robert E. Lee Blvd., New Orleans 19, Louisiana.

*One of the laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.

A Study of the

By T. Hargreaves
General Superintendent
Caldwell Linen Mills, Inc.

EXCLUSIVE

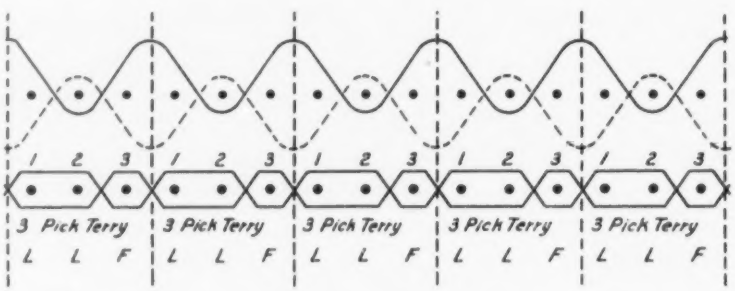
THE BASIC three-pick terry weave has survived a century of use and is still found in practically all the towels woven today. Many attempts, however, have been made to improve on this weave, particularly for those designs in which it is desired to move the pile loops from face to back and vice versa. All of the methods used up to this time have had certain shortcomings which result in production of awkward and/or irregular pile structure.

This illustrated story is intended to give the reader an idea of the difficulties encountered in moving the pile loops from face to back and vice versa by showing various warpwise cross sections of the more or less standard methods now being employed in terry weaving.

In the accompanying diagrams, solid lines represent colored loops of pile (commonly referred to as face pile), and broken lines represent white loops of pile (commonly referred to as back pile).

In all of these diagrams, the usual set-up of the terry loom is presumed to be in operation; that is, the reed is swung back on certain picks called loose picks (labeled "L") and held fast on certain picks called fast picks (labeled "F"). The weaving of terry requires two warps, known as ground warp and pile warp. The ground warp is continually

Figure 1 ♦



The commonly used three-pick terry weave. In this weave the reed is loose on the first two picks and tight on the third pick. The let-off motion for the pile beam is under normal tension for the first two picks and feeds an excess of yarn on the third pick.

The pile ends are arranged to weave equally on face and back of the cloth, giving a uniform pile surface on both sides. Colored face pile yarns are shown in solid lines, and the white back pile yarns are shown in broken lines. All the loops are equally spaced and are uniform in size.

The ground weave is a 2-1 warp rib weave. The pile weave is also a 2-1 warp rib weave, but is out of phase with the ground weave.

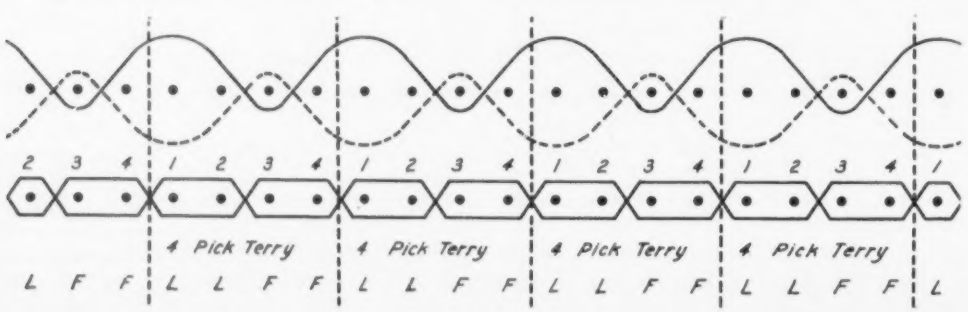
Figure 3 ♦

Here is a four-pick terry weave having all colored pile (solid lines) on the face and all white pile (broken lines) on the back.

Like the design in Fig. 1, all the loops are equally spaced and of uniform size. In this weave, however, the loops are over or under three picks, which means that the cloth will have only three loops in the same space that the regular three-pick terry weave would have four loops.

In the finer, higher count cloths this decrease of loops would not be very noticeable, but in the coarser, lower count cloths the shortage of loops would probably make quite a difference.

In this case the ground weave is a regular 2-2 warp rib weave. This could be changed by crossing the ground ends between the third and fourth picks, thus weaving a 2-1-1 warp rib weave. This would make a firmer ground without being detrimental to the loop formation.



Loop Structure of Terry Towels

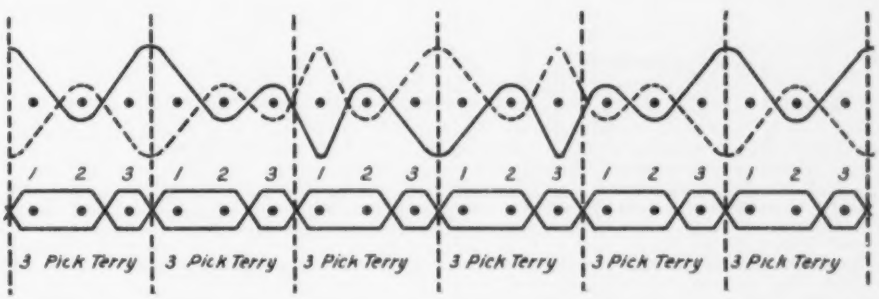
Difficulties encountered in moving pile loops from face to back and vice versa are pointed out by showing various warpwise cross sections of the more or less standard methods now being employed in terry weaving. Method is proposed for using a four-pick terry weave to eliminate irregular loop size and spacings.

under normal warp tension, but the pile warp is controlled by a special tensioning device which holds the warp under normal tension on the loose picks and feeds an excess of pile warp yarn to form the loops on the fast picks.

A new method is proposed for using a four-pick terry weave to eliminate irregular loop size and spacings. It is the author's adaptation of a method developed in Germany wherein a Jacquard head is arranged so that each card controls four picks instead of the usual three.

In the warpwise cross sections shown, remember that the lower sketch represents the ground weave and the upper part the terry formation.

Figure 2 ◗



This is also the regular three-pick terry weave, but in this case the colored loops of pile (solid lines) are moved from face to back at intervals and at the same time the white loops of pile (broken lines) are moved from back to face.

In such a case, the loops are no longer evenly spaced, nor are they of equal size. At the points wheer the loops are moved from face to back or vice versa, the pile ends are over or under only one pick of filling instead of the usual two picks.

It is this defect of loop formation, particularly noticeable in the fancier designs, which has led to numerous experiments with other terry weaves in attempting to eliminate this difficulty.

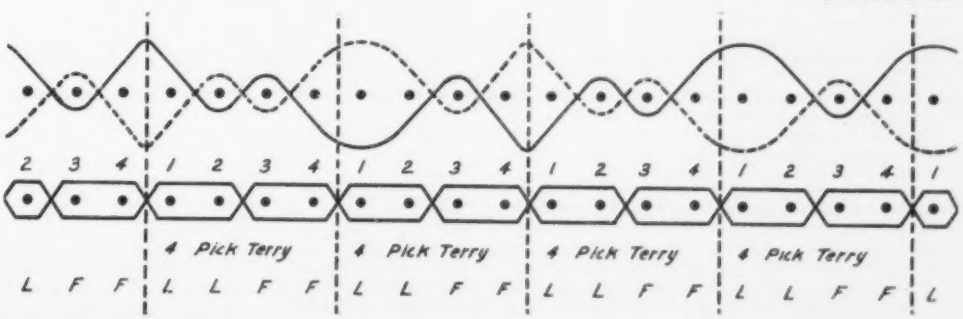
Figure 4 ◗

This is a four-pick terry with the colored face loops (solid lines) and white back loops (broken lines) interchanging in a manner similar to the three-pick terry in Fig. 2

As in Fig. 2, the loops are not evenly spaced and are not of equal size. But this method is an improvement over the method used in Fig. 2 in that the difference in loop formation is considerably lessened.

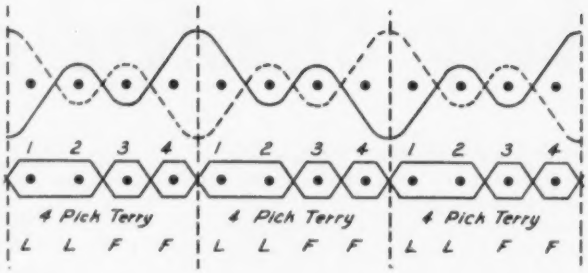
By this four-pick method it is possible to weave one colored loop on the face and one white loop on the back and then interchange with the white for one colored loop on the back and one white loop on the face. This rapid changing is not possible with the three-pick terry weave since the pile threads would be weaving in plain cloth formation with all loops over and under succeeding picks, in which case the loops might go either to face or back by chance rather than by design.

Continued on next page



Terry Loop Structure continued

Figure 5 ♦



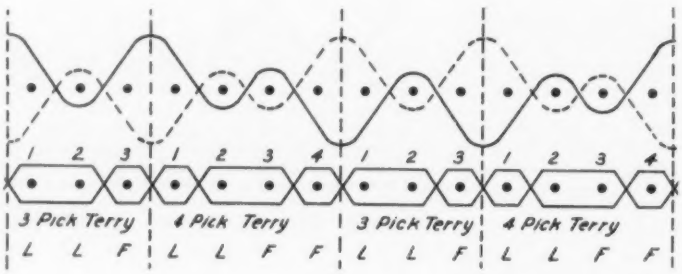
This four-pick terry weave is designed to weave alternating loops of colored pile (solid lines) and white pile (broken lines), interchanging from face to back and vice versa. In this case, all the loops are of equal size and are evenly spaced. The firmer ground as recommended in Fig. 3 is utilized. Every pile loop is firmly held in place, and the whole towel is firmly constructed by use of this weave.

This weave is also useful for all white towels, or all colored towels. If the pile warp is drawn two color-two white throughout, a combination of mottled color and white effect can also be achieved.

It is also very useful for weaving a towel with Jacquard effects at each end, using a dobby loom. In this case, the weave shown here is used in the body of the towel, thus simulating a plain terry weave. The bordered Jacquard effect, requiring groups of pile ends on each pile harness, would use the regular three-pick terry weave forming block terry arrangements to produce the fancy pattern. The terry body would show as evenly spaced bars of terry, evenly distributed on both face and back.

Designs calling for reversible color and white fancy terry weaves could not be produced by this method.

Figure 6 ♦

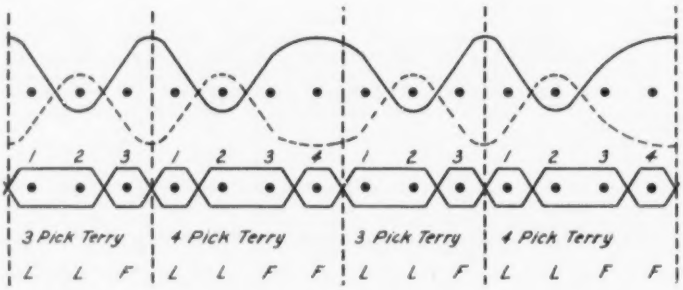


A German method, described by H. Petzold in "Melliand Textilberichte," November 1951, for overcoming the defects of loop formation described in Figs. 2 and 4.

In this case, the three-pick and four-pick terry weaves have been combined. This particular weave example shows two colored loops (solid lines) on the face and then two white loops (broken lines) on the face, etc., the colored loops moving from face to back and the white loops moving from back to face. The loops are over or under two picks and are all equal in size, but they are not evenly spaced.

The principle seems to be such that the regular three-pick terry weave would be used except when the loops are to interchange positions (face to back and vice versa) in which case a four-pick terry weave could be used for only one loop cycle. This should prove especially useful in preventing the last terry loop from disappearing as the change takes place in broad blocks of alternating color and white terry checks.

Figure 7 ♦



Here is what happens when the German method of combining the regular three-pick terry with the four-pick terry is used without the interchange of face and back pile. As can be seen, some loops float over three picks and others float over only two picks, but all loops are distinctive and well bound.

The irregular loop that is floating over three picks will occur only when provision is made for introducing the four-pick weave to allow some other pile ends to change from face to back or vice versa.

In fancy terry weaving, all the pile threads do not interchange at the same time, so the combination of Figs. 6 and 7 will give a picture of what would happen when using this method on fancy terry effects where the pile ends have varying times of interchange.

Looms set up to weave fabrics shown in Figs. 3, 4, 5, 6 and 7 will require a different type of control for the terry motion from the normal three-pick cam control. The opening and closing of the reed will need to be controlled by a dobby head, pick-by-pick as desired. Cam timing combined with the dobby control is an ideal way of handling these weaves. Also, in some of these cases, a dobby will be required to control the harnesses.

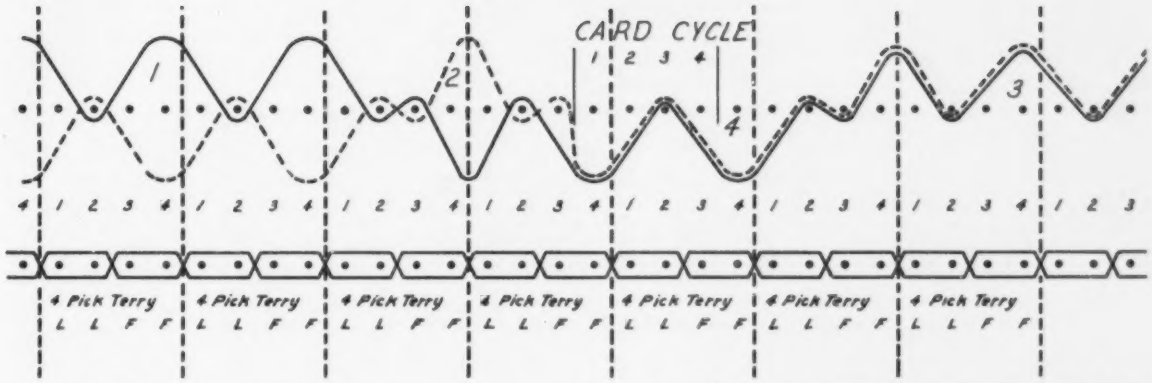


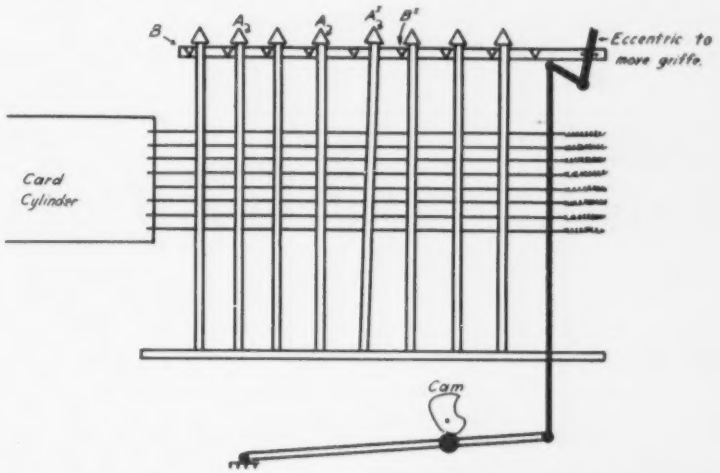
Figure 8 ◂

This is a four-pick terry weave in which the loops are shown in each of the four arrangements possible: Position 1—Colored loops on face, white loops on back; Position 2—White loops on face, colored loops on back; Position 3— Colored and white loops all on face, no terry on back; Position 4—Colored and white loops all on back, no terry on face.

By examination it will be seen that terry loops are formed on the face as follows: On the first pick the pile end is lifted and the reed is loose; on the second pick the pile end is lowered and the reed is loose; on the third pick the pile end is lifted and the reed is fast to beat all three picks to the fell of the cloth; on the fourth pick, the reed is fast but the pile end may be lifted if the next loop is to be on the face or lowered if the next loop is to be on the back.

To form terry loops on the back of the cloth, the lifting or lowering of the pile ends will be the exact reverse of this procedure, the reed movement being the same as outlined.

Figure 9 ▸



In this special Jacquard construction of German origin*, one card serves for four picks to operate on the four-pick terry cycle.

With this arrangement, the hooks have double catches (shown at A) and the knives can engage the hooks at either side (shown at B). The cards are turned between the third and fourth picks of the four-pick cycle so that each card actually selects the hooks for the fourth pick of one cycle and the first, second, and third picks of the next cycle.

The griffe is given a side movement by an eccentric between the second and third selection of hooks by the card so that a mutual binding of both the face and back pile loops is obtained. The hook marked A^1, which has remained down until the moving of the eccentric, is now engaged by the knife marked B^1 and so is raised. The other hooks do not contact the knives and remain down. In this manner the face loop is completed and the back loop is begun.

In the writer's opinion, a double lift Jacquard could also be arranged to operate so that one card would serve for four picks. This arrangement would necessitate each needle controlling two hooks—the hooks facing each other with the knives reversed to take care of the changed hooks and each pair of hooks connected to one neck cord. Thus, if a hole is presented to the needle, one of the pair of hooks will be allowed to connect with its corresponding knife and so will be raised or lowered as the knife lifts or lowers in the four-pick terry cycle. The opposite hook of the pair will not connect with its knife but would if a blank were presented. One cylinder is all that would be required.

The knives would be lifted by cams so that they operated as follows: First pick—knife raised, pile end raised; second pick—same knife remains up, pile end remains up; third pick—knife lowered, pile end lowered; fourth pick—knife raised, pile end raised. Thus would the four-pick cycle be completed for a face loop.

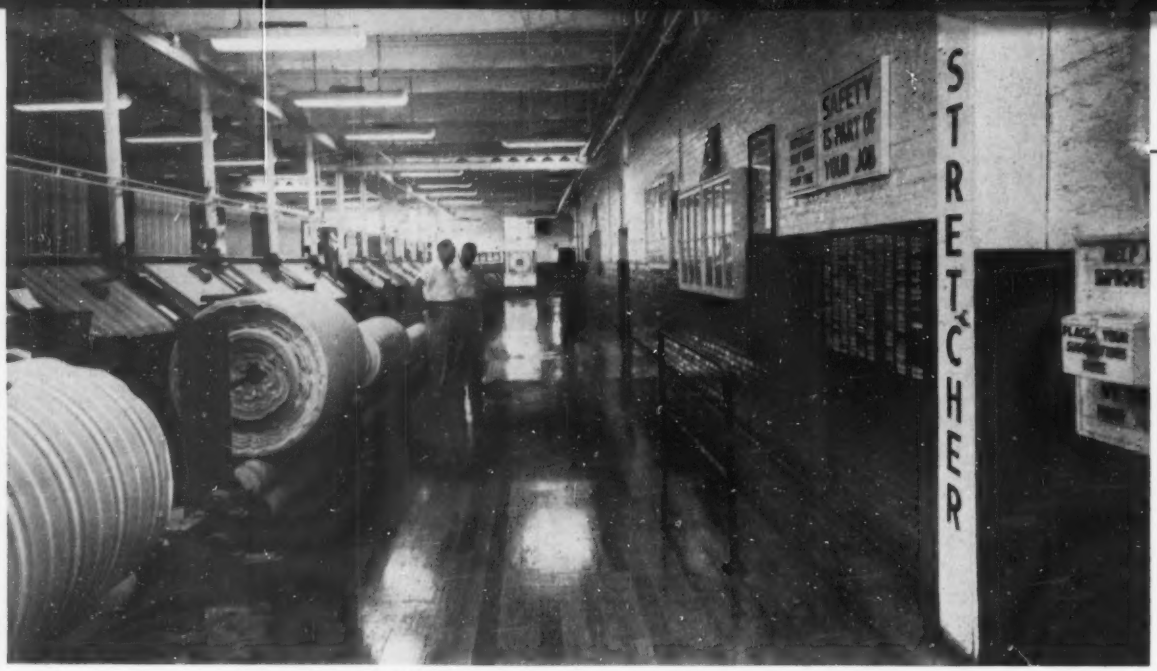
The other knife would engage all hooks operated by a blank in the card as follows: First pick—knife down, pile end lowered; second pick—same knife remains down, pile end remains down; third pick—knife raised, pile end raised; fourth pick—knife lowered, pile end lowered. Thus would the four-pick cycle be completed for a back loop.

In order that the hooks would engage correctly with the correct knife, the cards would be cut so that a hole in the card would lift the odd numbered terry ends and a blank in the card would lift the even numbered terry ends.

This same principle has been used for over fifty years in a British mill using one card for three-pick terry work (see TEXTILE INDUSTRIES, April 1952). The only difference in adopting it to weave four-pick terry would be the drive to the lift of the knives. This drive would have to be arranged to give a pause on the second pick so that one knife is kept lifted and the other knife is kept lowered for an extra pick. It should be a fairly easy problem to devise a cam which would give such a pause.

The card cycle of the loom and the weave cycle of the design would have to be rearranged so that the card actually would control the fourth pick of one cycle and the first three picks of the next cycle. In other words, the card cycle and the weave cycle would be out of phase by one pick. This arrangement is shown at the top of Fig. 8. The reed motion would be fast on the first and last picks and loose on the second and third picks represented by each card.

*H. Petzold, "Melliand Textilberichte," Nov. 1951.



TREATED FLOORS, treated light fixtures—cleaning costs reduced!

Smooth Surface Easy Clean

By J. F. Cooley
Superintendent
R. E. Ray
Maintenance Foreman

EXCLUSIVE

THE Alexander City, Ala., plant of Avondale Mills decreased the cost of cleaning by treating certain surfaces with products which make the surfaces smoother and reduce the amount of dirt, lint, or grease which will cling to or be absorbed by the surface; also, the smooth surface can be cleaned quicker now by wiping, mopping, or blowing-off. Products and technical services were supplied by West Disinfecting Company.

Floors. On a schedule designed to minimize interruption of the mill's production, floors were thoroughly cleaned, sanded, rinsed with water, permitted to dry, and three applications of a non-slip penetrating floor finish were given. Result, sweepers could then use a specially-treated mop instead of a broom, and cleaning time was reduced by 25 to 30%.

Areas beneath machines were treated similarly with another product to provide maximum protection against entrance into wood pores by grease and dirt. This pigmentation is available in a variety of colors; gray was used at Avondale.

The applications will be renewed with a single treatment annually, but in the meantime the floors can be cleaned easily with a general purpose cleaner. Expected savings are a 50% reduction in floor maintenance costs. Further sandings are considered unnecessary. Also, the floor sealers provide protection from damage by heavy trucks and dollies.

Lighting Fixtures. Maintenance cleaning of lighting fixtures was reduced by applying to the outsides a formation with a high-luster surface finish which permits lint and dust to be wiped off easily, even in high humidities.

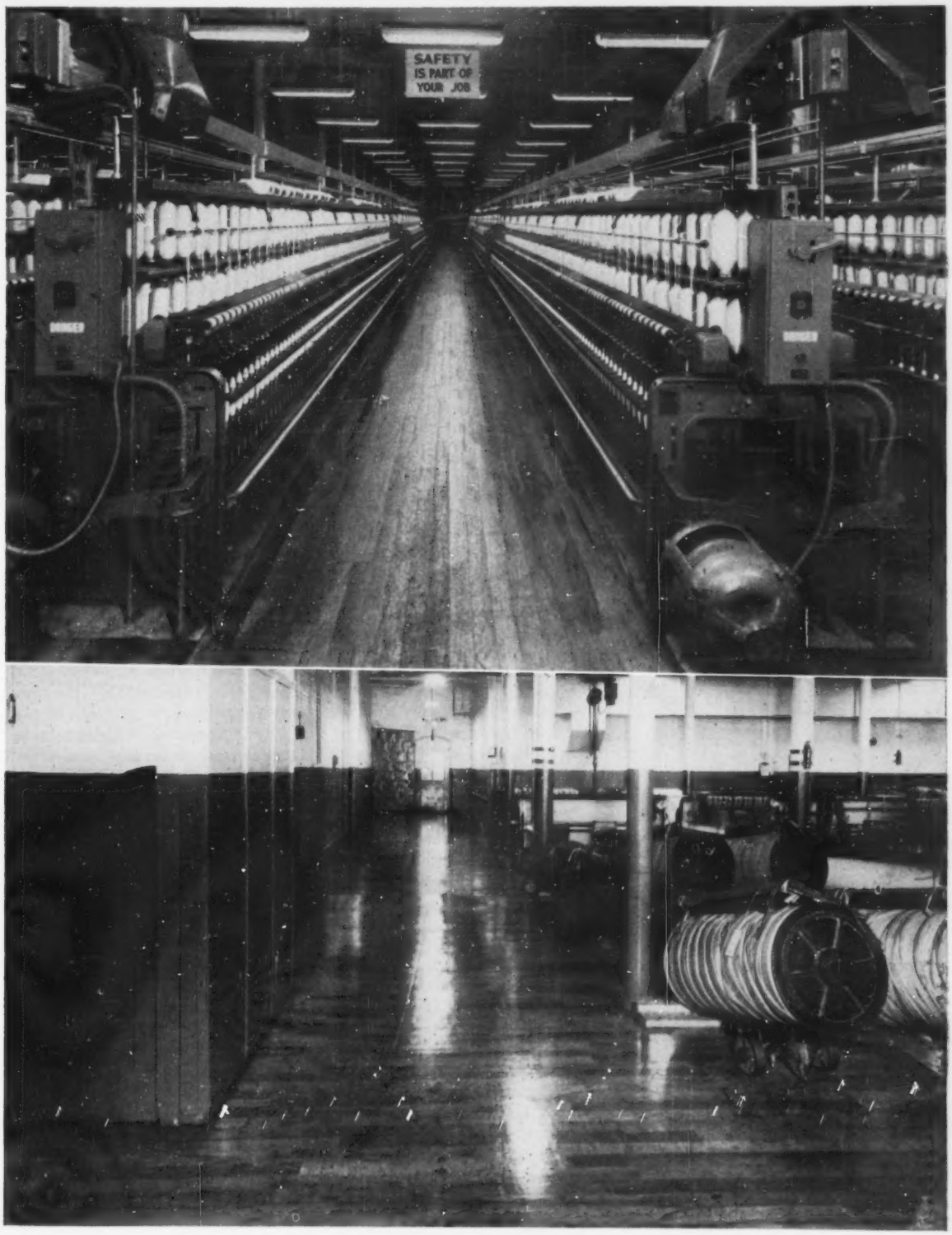
Other Surfaces Treated. Lines for humidifying units have also been painted with a product which reduces the amount of lint which collects on the lines, and which makes a smooth surface for blowing-off or wiping-off the lint.

The principle of surface treatment to give a smoother and protective finish was extended to roving boxes to prevent rusting grading tables in the finishing department, and spinning creels.

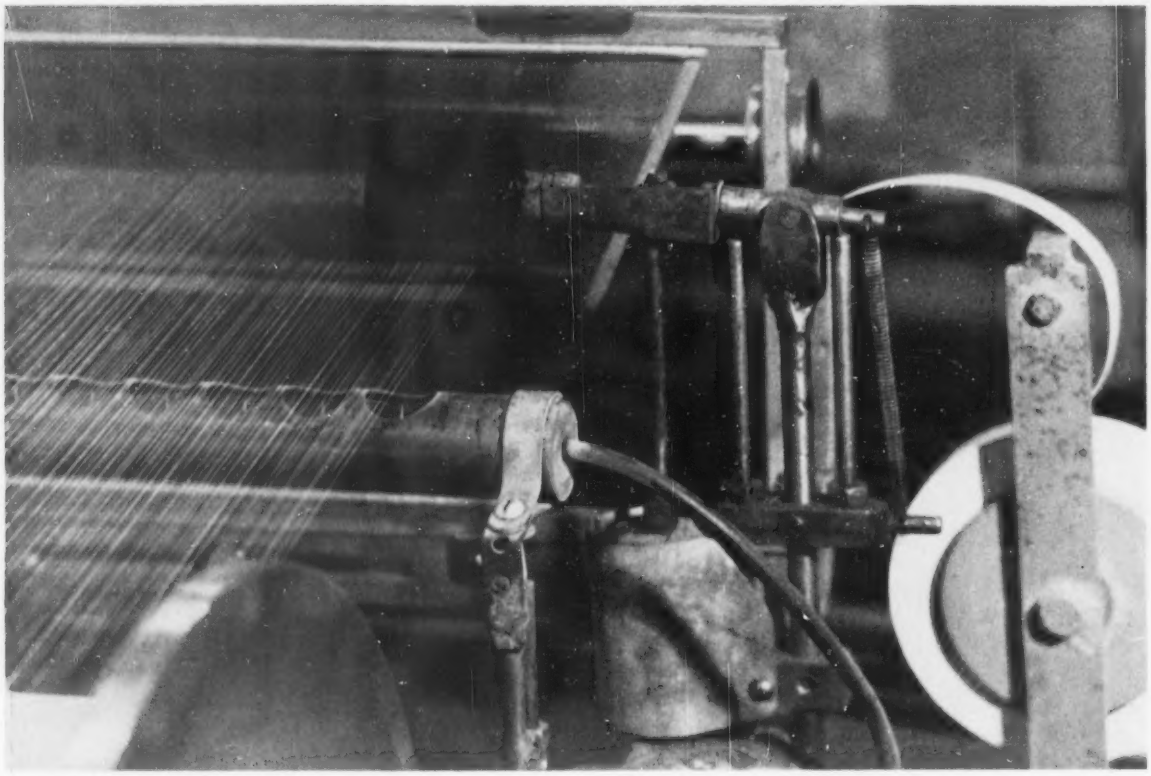
For general cleaning, it is now possible to use an air hose and blow lint, dust, and dirt from any surface that has been treated.

Technical assistance for this job was rendered by H. A. Leche, mgr., and T. C. St. Ledger of West Disinfecting Co., Birmingham, Ala.

NO TROUBLE to remove dirt and lint. Treated for smoothness are humidifier lines, spinning creels, and roving boxes (rust protection also). Floors are mopped, not swept.



SEALING on floors provides protection for heavy loads in transit.



DAUBER TOUCHES WARP sheet and makes a color mark about 4" long. Energized electric solenoid pulls color dauber into position.

Color Marker for Tricot

Aids in holding Correct warp ratio

WHEN warps are made for tricot knitting, it is the usual practice (in old style warping) to mark the edge of the warp with a fugitive dye. The warps are run into the knitting elements at a predetermined ratio; for example, a ratio of 3 to 4. The dye on the warp edges makes it possible for the knitter to maintain this ratio throughout the length of the warp, which is one of the essentials in producing a uniform piece of material.

With the advent of beamer warping, the color system was dropped, since no such provision was incorporated in the machine. The beaming process is run at high speed and since the running-on process is eliminated, the warp could not be marked as before.

At first it was decided to use no marking system at all, relying on the knitter to maintain the correct runner length on the knitting machine. This procedure was not satisfactory because of the human element involved and also because the knitters were accustomed to the color system to hold the correct warp ratio.

The following system was worked out, whereby the warps could be marked with dye as had been the usual practice.

Modern Procedure. The beamers at this mill are Reiner and are equipped with a presser roll. This roll presses the yarn on the bobbin, compacting it and producing an even yarn sheet. The roller is made exactly a yard in circumference so that in addition to its other uses, it serves as a means of determining the length of the warp. A flexible cable connects the roller to a speedometer and yardage counter (one revolution equals one yard).

In ordinary practice, the first bobbin made is the one which determines the amount of yarn in the warp. The run of the bobbin is terminated manually when the desired yardage is reached. The number indicated by the revolution

By George W. Taylor
Fulton County Silk Mills
Gloversville, N. Y.

EXCLUSIVE

counter, driven directly by the rotation of the bobbin, is noted and this counter is set to automatically knock-off at the revolutions determined by the first bobbin. The yardage counter is not used for the remainder of the warp, as the predetermining counter makes each bobbin of the warp exactly the same length.

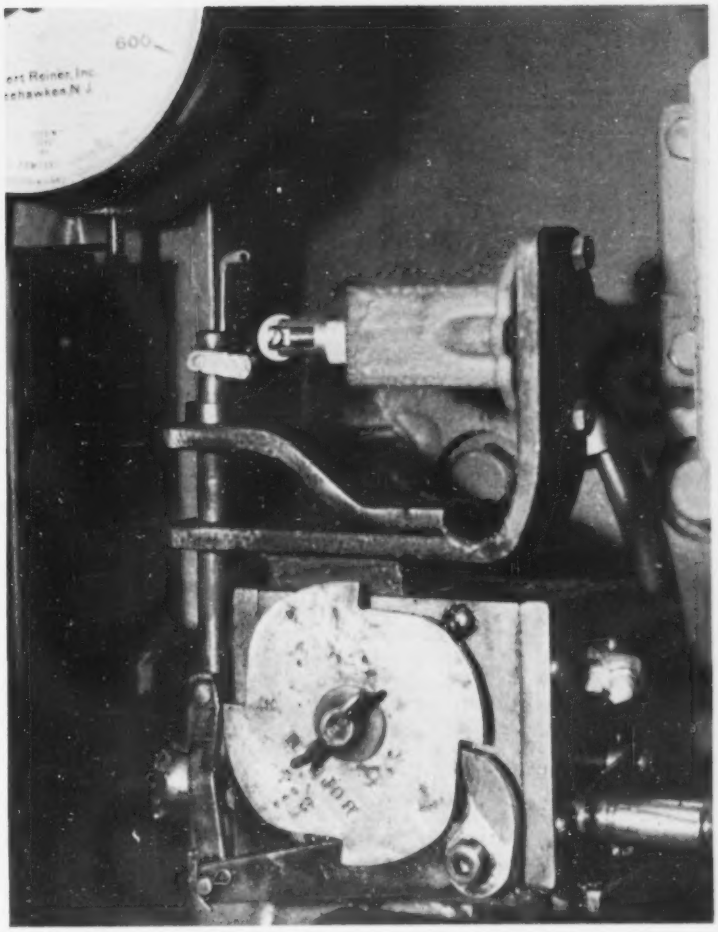
However, the yardage counter seldom registers the same yardage for each bobbin, although the predetermining counter makes each bobbin exactly the same number of revolutions. This is caused by slippage of the presser roller, variations in the length of the bobbin between heads, and other variables. After much thought, it was decided to mark the warp in yards (through the action of the presser roller) although these variables might cause trouble.

Marker Mechanism. In order to obtain the ratio necessary, a gear reduction drive was made because the space available was too small for commercial types of drives. This gearbox was used to drive a cam which would control the marking of the yarn sheet. The gearbox is placed just above the yardage counter and is driven through miter gears from the same shaft that drives the yardage counter and speedometer. This shaft in turn is driven by the presser roller and flexible shaft previously mentioned.

The gearbox is of 660 to 1 ratio as this ratio is divisible by the yarn ratios used by the plant; namely, 2-3, 3-4, 5-6, etc.

The cam, driven by the gearbox, is fixed to the gearbox shaft by a wing-nut, so that other plate cams can be easily interchanged.

As shown in the accompanying illustrations, a pawl rides the cam and makes contact with it at all times. Levers are used to connect the pawl with a micro-switch. These are made so that the switch is actuated only as the pawl drops into the tooth on the plate cam. When the micro-switch is actuated, current is sent through a solenoid which pulls a color dauber down. The dauber touches the edge of the warp sheet and makes a color mark about 4" long.



SWITCH IS ACTUATED only as pawl drops into the tooth on plate cam. Switch energizes solenoid which pulls color dauber down.

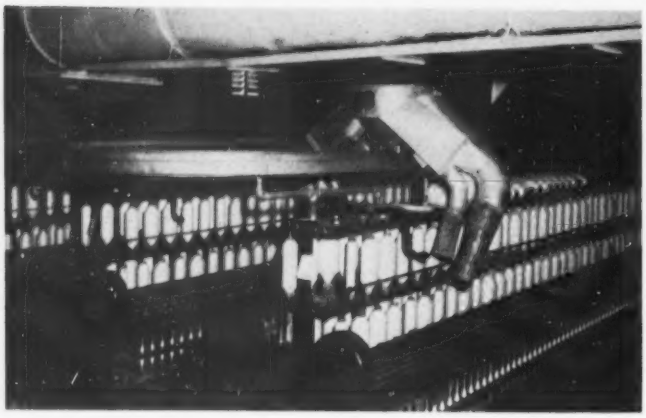
The color daubers are interchangeable (red for bottom warp, blue for top) and are made of felt. When not in use, these are kept in a jar of the colored liquid and when placed on the dauber mechanism, will usually last through a 12,000-yard warp without further wetting.

Back-Up Device. The Reiner beamer has a back-up device called an elevator, used when it is necessary to roll back the warp to pick up a broken end. The bobbin can be backed up seven or eight yards. If the warper should decide to back the bobbin at a point where the color dauber had just tripped, trouble would be encountered in the gearbox-cam arrangement. Therefore, the drop on the cam was undercut so that the backward motion can approach 15 yards before the pawl strikes the bottom of the drop.

The gearbox can also be easily taken out of gear, being held in mesh with the driver gear by a simple detent. Thus the gearbox is used only on the first bobbin.

Braking. A snap switch is used to turn off the power to the unit, and a plugging arrangement is used so that instead of operating the color dauber, the micro-switch actuates the brake of the machine. Thus, when making Milanese warps, the machine can be stopped at any yardage in the range of the plate cams and tickets inserted; tickets being preferred to color in the Milanese warps.

This braking arrangement is al-



Traveling Cleaner Reduces Ends-Down, Cuts Cleaning Costs

When a section of the spinning room at Joanna Cotton Mills Co., Joanna, S. C., was recently converted to new-type Parks-Cramer traveling cleaners, with flexible cuff extensions, ends down were reduced 10%, by actual test. The extensions permit air blasts to be directed to parts of the frame that were previously inaccessible.

Extra cleaning and stopping of frames for blowing down have been eliminated. Frames are now blown down every two weeks; they were blown down weekly before the new cleaners were installed. Joanna's management estimates that savings on extra cleaning alone will pay for the installation in less than 18 months.

The new traveling cleaners run on the same track as the old. However, the track was reinforced from 8-foot to 4-foot centers to support the added weight.

Designated Type CTF-5, the frame mounted traveling cleaner can also be used in tandem with the Parks-Cramer Type CTR-7 room cleaner (see TI for February, 1954, page 212) to provide overhead cleaning.

Mill Makes Color Movie to Stimulate Interest in Textiles as Career

A Georgia-produced motion picture in which all the actors are residents of Jackson County, Georgia, had its premier showing in Jefferson, Ga., recently before an audience of 2,500 persons.

Produced for The Jefferson Mills, Inc., by the Beeland-King Film Co. of Atlanta, the picture, entitled "Opportunity America," highlights the career opportunities "at home" in Georgia's largest industry, textiles.

The picture, according to M. M. Bryan, Jr., president of the mill company, is based on a true story. The story is that of a young Jackson County resident who discovered that all is not gold that glitters afar and who found, in the textile manufacturing plant in his own home town, the career opportunity he thought originally could exist only outside the boundaries of his native state.

Filmed entirely in color, the picture runs 28 minutes and will be made available, Mr. Bryan said, to civic groups and schools desiring to show it.

so used in making tricot warps. When the warper reaches the end of the warp and the operator realizes that the next color will be the last, he changes the plug from "color" to "brake" and the beamer automatically stops at the next drop, preventing overruns.

Normally the first bobbin made is the yardage bobbin and the machine is set to this, so that all bobbins in one warp are the same length. The first bobbin is stopped at the desired yardage (say 12,000 yards). When using the color system, it has been found necessary to make some changes, merely to avoid confusion to the operatives.

When a 12,000-yard warp is specified, the end of the warp will be reached between two drops because 12,000 is not evenly divisible by 660. Suppose, for example, that a 12,000 yard top and a 9,000 yard bottom are being made. The blue colors on the 12,000 yard top will be 220 yards apart, since $660/3 = 220$. Thus, $\frac{12{,}000}{220} = 54+$, and the warp will end between the 54th and 55th drop. To avoid confusion, it has made standard practice to run on to the next (55th) drop and end the warp there, so that a definite point is established. Thus the warp is actually slightly over 12,000 yards. When the bottom is made, it is done exactly the same and contains 55 colors, 165 yards apart.

Making the warp this way starts it on the knitting machine with the colors coming up at the very beginning of the run. Color bobbins are placed in the knitting machines so that the marks are at the edge of the warp sheet.

A record is kept on each knitting machine of the racks at which each color appears. The operator on the next shift then has a general idea of how the warps are running in. In conjunction with the warp marks, runners are used as a means of determining which warp is running ahead or behind.

When the color comes down to the cloth, it actually is a series of marks on the selvage due to the wetting of successive layers of warp. This, however, is not detrimental since the series is of varying shades, the initial one being darkest and the whole series only a few inches in length.

This device has been in use on our beamers for over four years and has greatly facilitated the knitting operation.

How are cotton fiber characteristics

and spinning performance affected by

Irrigation?

By Jack D. Towery, Lyle E. Hessler, and Billy K. Power
*Cotton Research**
Texas Technological College
Lubbock, Texas

EXCLUSIVE

IN THE past few years a great deal has been said about the relative merits of rain-grown and irrigated cotton. Most of the published data compare the production of one area with the production of another area. In the published studies, the cottons were either representative of the area's growths or varieties developed for the specific area. *The work as presented in this paper was designed to show the effect of the same varieties, grown on similar soil, in the same geographical location, under identical conditions, but one was watered when moisture was needed and the other was left to natural conditions.*

Results. The fiber properties for the dry land and irrigated cottons were not greatly different. The most obvious difference was the staple length, the irrigated cotton being longer than the dry land cotton. The average difference for the twelve varieties was about 1/16 inch. Two varieties, the CA-119 and CA-122 had staple length differences of about ⅛ inch. Northern Star and Lankart did not differ in length from dry land to irrigated. The length uniformity ratio indicates that the irrigated cotton was more uniform than the dry land cotton.

Pressley strength of the dry land and irrigated series was about the same with the dry land varieties being more uniform in strength.

Differences in maturity were apparent between the irrigated and dry land cottons. Cotton bolls, which have opened through natural development, can be expected to contain fiber with the highest degree of maturity. Drought forced the development of the dry land cotton, and the bolls were fully opened by the time of frost. The frost, on the other hand, caused the undeveloped bolls of the irrigated cotton to open prematurely and the effect on fiber maturity was apparent.

The dry land cotton had an average maturity of 83 per cent and the irrigated cotton was 10 per cent less mature or 73 per

*Fiber and Spinning Laboratory of The Cotton Research Committee of Texas.

Where and How the Study Was Made

The area in which this study was made is known as the High Plains of West Texas. The average elevation is about 3200 feet above sea level, and rainfall averages about 20 inches per year. Under normal conditions much of this rainfall comes during the cotton growing season and could be considered ample to produce a crop. However, most years the rainfall is spread over such a range of time, that the dryland cotton is under considerable stress for water. During the 1952 season drought conditions existed and even greater stress was experienced.

The high altitude results in a relatively short growing season, varying from 197 to 217 days. These conditions have led the cotton breeders to develop early maturing varieties well suited for both dry land and irrigated farming. The practice of allowing frost to defoliate the cotton plants for mechanical harvesting has necessitated the development of storm-proof varieties, a tight-lock cotton which will withstand long periods in the field after bolls open.

With the flat, level country, good soil, and increased irrigation, this area accounts for more than a million bales annually or approximately 10 per cent of the nation's production. The methods of growing, harvesting, and ginning are peculiar to this area. No distinction is made between irrigated and dry land cotton. One is as readily accepted as another. With the aid of fiber laboratory equipment and pilot plant equipment, this study seeks to determine the effect of watering on cotton developed for this area.

Methods and dates of soil preparation, planting, harvesting, and ginning were the same for both series of tests. The only difference in cultural practice was, at the same planting rate, the irrigated cotton produced a 2½-inch spacing, while the dry land cotton produced a 4-inch spacing. The difference in spacing may be attributed to better emergence of the plants in the more favorable irrigated soil. The irrigated cotton received three inches of water before planting and six inches in two waterings after planting. The dry land cotton received ample moisture through the middle of July or until the first blooms. For the remainder of the growth period, the extreme drought and high temperatures created considerable stress on the development of the dry land cotton.

Table 1. Irrigated and Dryland Fiber Properties,

Property of Characteristic	Method or Type of Watering	CA-89A Stormproof	Dunn No. 7 Stormproof	CA-122 Stormproof	Northern Star	Stormaster	CA-119 Stormproof	Stormking
Classer's Grade (U.S.D.A. Standards)	Dryland	SLM+	LM	SLM	LM	SLM+	LM+	LM+
	Irrigated	LM	SGO	SGO+	SGO	LM+	LM	SGO+
Classer's Staple (inches)	Dryland	7/8	7/8	29/32	29/32	29/32	29/32	7/8
	Irrigated	29/32	31/32	31/32	31/32	29/32	31/32	15/16
Upper-Half-Mean Length (inches)	Dryland	.86	.82	.84	.94	.83	.85	.84
	Irrigated	.94	.90	.97	.94	.86	.97	.94
Length Uniformity Ratio (per cent)	Dryland	76	80	77	75	75	76	77
	Irrigated	81	76	78	78	76	80	78
Pressley Strength 1000 lb/sq in	Dryland	83.8	77.7	86.2	88.5	83.3	81.3	81.8
	Irrigated	86.0	76.0	89.3	87.4	80.5	86.3	79.7
Maturity (Polarized Light) per cent	Dryland	84	85	82	88	83	82	82
	Irrigated	79	75	70	82	80	70	64
Fineness Micrograms/inch	Dryland	4.0	4.6	4.4	4.6	3.6	4.0	4.6
	Irrigated	4.0	4.2	3.9	4.2	3.7	4.5	4.3
Neps per 100 square inches Card Web	Dryland	15	7	16	11	23	20	15
	Irrigated	12	13	22	16	34	17	14
Opening and Picking Waste (per cent)	Dryland	6.5	7.9	6.0	10.1	5.8	12.9	10.9
	Irrigated	11.6	13.9	13.8	10.5	11.7	10.9	13.1
Carding Waste (per cent)	Dryland	7.0	6.6	5.0	5.7	6.8	5.0	5.2
	Irrigated	5.9	7.5	7.7	8.2	6.6	7.1	6.5
Total Waste (per cent)	Dryland	13.4	14.5	11.0	15.8	12.6	17.9	16.0
	Irrigated	17.5	21.4	21.5	18.7	18.2	17.1	19.6
22's Yarn-Skein Strength (pounds)	Dryland	88.6	61.7	85.8	88.8	82.9	81.8	70.6
	Irrigated	96.5	77.7	96.3	95.5	88.2	95.2	90.0
14's Yarn-Skein Strength (pounds)	Dryland	148.9	115.2	150.5	154.4	142.4	147.2	126.9
	Irrigated	172.3	138.4	172.0	169.2	157.5	173.4	159.1
Yield per Acre (pounds)	Dryland	127	151	126	157	154	152	160
	Irrigated	525	574	541	508	463	526	517
Bolls per Pound	Dryland	84	75	84	98	92	94	101
	Irrigated	82	78	80	75	77	82	78
Lint Per Cent to Seed Cotton	Dryland	37.6	42.8	40.4	39.4	36.6	37.4	42.9
	Irrigated	37.8	41.1	38.8	39.4	36.4	38.4	38.9

Explanation of Fiber Properties:

The upper-half mean is the average length of the longest half of the fiber by weight and corresponds very closely to staple length as determined by the classer.

The mean length is the average length of all fibers in the sample excluding those ¼ inch or under.

Uniformity is the measure of fiber length distribution and is the ratio of the mean length to the upper half mean length expressed in per cent.

Fiber tensile strength is the force in 1000 lb required to break the equivalent of a surface area of one square inch calculated from Pressley Index.

Fiber fineness is linear density expressed in terms of micrograms per inch.

Fiber maturity represents the percentage of thick-walled fibers based on the polarized light method of determination.

Neps per 100 square inches of card web based on a 40-grain sliver. Grade names used and abreviations:

Middling (M), Strict Low Middling (SLM), Low Middling (LM), Strict Good Ordinary (SGO), and Good Ordinary (GO).

cent. Average fineness for both series was the same. The dry land cotton had a fineness of 4.1 and the irrigated cotton was 4.0 micrograms per inch. In spite of the significant difference in maturity, both series would be classified as average maturity or better. With these maturities being average or above, and the finenesses being the same, no nep differences would be expected.

This proved to be true as the irrigated cotton had an average nep-count of 18.8 neps per 100 square inches of card web and the dry land cotton averaged 16.2 neps. Since about 8 neps per 100 square inches of card web were required for significant difference between two tests, the dry land-irrigated results can be said to not differ significantly. These significant figures were based on results of the laboratory in which these tests were conducted.

As the accompanying table shows, yarn strength for the irrigated cotton was better than the dry land. The higher yarn strength can be attributed to the fiber length and fineness. When the upper half mean length for the dry land and irrigated cotton within the same variety were about equal, the finer irrigated cotton

Yarn Strength, and Growth Characteristics

Property of Characteristic	Method or Type of Watering	Western Stormproof	Macha No. 1	Stormproof No. 1	Macha Early	Lankart 611	Average Property	Standard Deviation For Av. Property
Classer's Grade (U.S.D.A. Standards)	Dryland	GM-LS	SLM	SLM+	SLM	M	SLM+	——
	Irrigated	SLM	SGO	GO	LM	LM	SGO+	——
Classer's Staple (inches)	Dryland	29/32	29/32	7/8	7/8	29/32	29/32	——
	Irrigated	29/32	29/32	7/8	29/32	15/16	15/16	——
Upper-Half-Mean Length (inches)	Dryland	.90	.87	.86	.87	.94	.868	.0378
	Irrigated	.96	.92	.90	.96	.96	.930	.0329
Length Uniformity Ratio (per cent)	Dryland	77	74	78	77	77	76.6	1.50
	Irrigated	76	76	78	79	78	77.8	1.57
Pressley Strength 1000 lb/sq in	Dryland	86.9	79.9	80.0	81.8	82.1	82.78	3.015
	Irrigated	90.5	80.4	78.6	80.5	84.3	83.29	4.418
Maturity (Polarized Light) per cent	Dryland	77	78	86	80	88	82.9	3.38
	Irrigated	67	62	74	72	76	72.6	6.80
Fineness Micrograms/inch	Dryland	4.1	3.6	4.3	3.5	4.0	4.1	.384
	Irrigated	4.2	3.8	3.8	3.6	4.2	4.0	.262
Neps per 100 square inches Card Web	Dryland	10	20	12	32	14	16.2	6.46
	Irrigated	11	25	20	27	15	18.8	6.69
Opening and Picking Waste (per cent)	Dryland	6.9	10.0	6.5	10.5	7.6	8.44	2.223
	Irrigated	9.0	9.7	13.3	15.2	9.7	11.88	1.972
Carding Waste (per cent)	Dryland	5.9	7.0	7.8	8.2	6.4	6.39	1.024
	Irrigated	4.4	7.9	8.8	7.3	6.5	7.02	1.108
Total Waste (per cent)	Dryland	12.7	17.0	14.3	18.7	14.1	14.82	2.197
	Irrigated	13.5	17.6	22.1	22.5	16.1	18.80	2.596
22's Yarn-Skein Strength (pounds)	Dryland	72.8	79.0	71.0	80.8	92.7	79.71	11.638
	Irrigated	90.4	90.7	81.5	83.2	94.9	90.01	6.034
14's Yarn-Skein Strength (pounds)	Dryland	140.1	149.5	129.0	144.8	159.7	142.38	12.231
	Irrigated	160.1	153.7	149.5	153.9	167.2	160.52	10.334
Yield per Acre (pounds)	Dryland	129	121	143	128	143	140.9	13.38
	Irrigated	466	483	586	467	508	513.7	38.66
Bolls per Pound	Dryland	87	89	86	87	78	87.9	7.24
	Irrigated	81	85	81	87	69	79.6	4.52
Lint Per Cent to Seed Cotton	Dryland	39.5	37.3	37.6	39.4	37.3	39.02	2.045
	Irrigated	37.8	36.5	40.1	36.1	38.9	38.35	.460

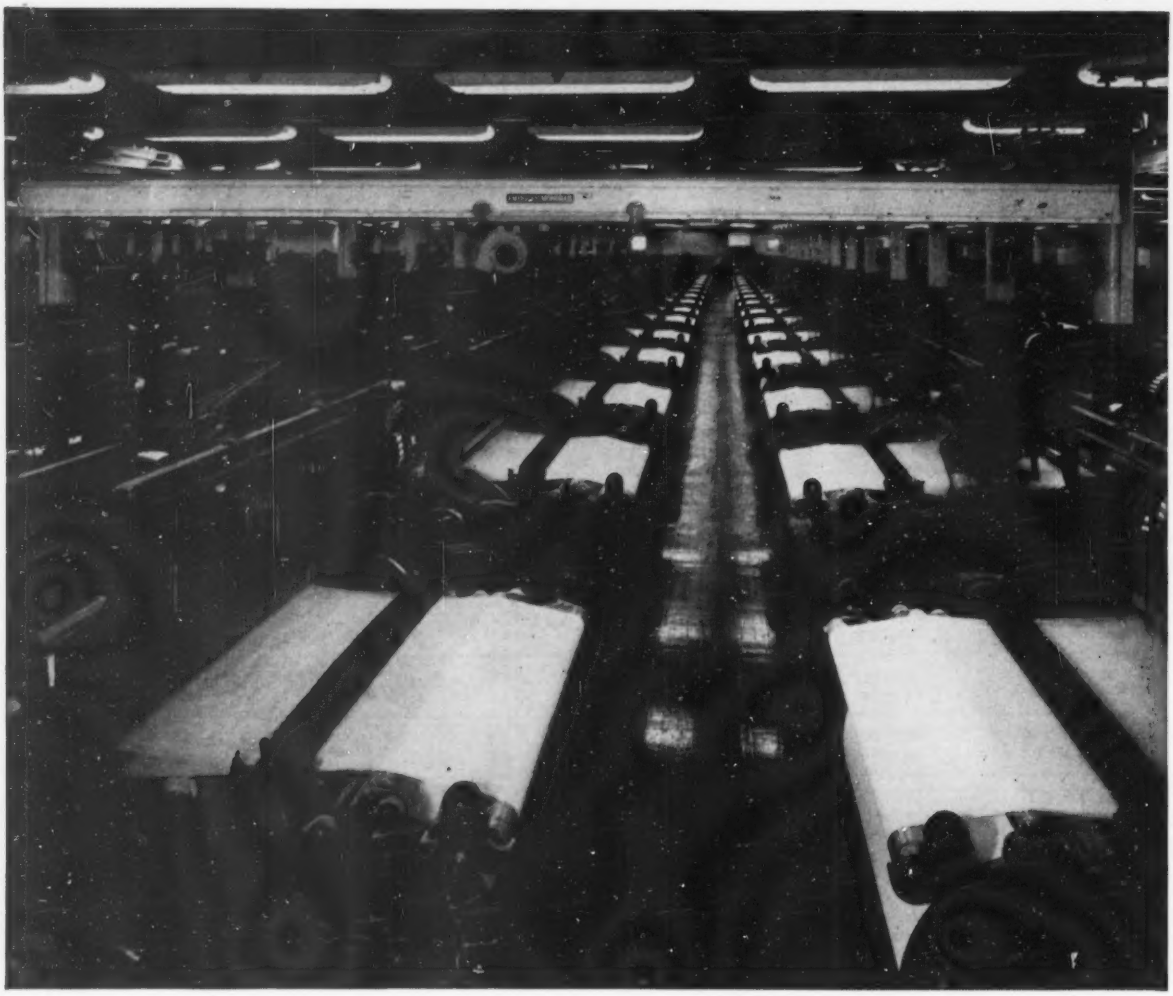
produced a stronger yarn.

The classer's length of the irrigated cotton averaged 1/32 inch longer than the dry land cotton. The Fibrograph produced a length difference of 1/16 inch. This lack of agreement was not unusual for cottons less than one inch in length. The general observation was that the classers apparently called the dry land cotton 1/32 inch longer than the Fibrograph, with good agreement in the irrigated cottons.

Irrigated cotton required an average of 80 bolls to make a pound and the dry land cotton required 88 bolls. The lint percentage to stripped cotton for dry land cotton was about 3 per cent more than the irrigated cotton. Yet, the lint percentage to seed cotton is the same. This indicated that whereas the irrigated boll was heavier, the weight difference was not lint or seed. The overall yields were more than three times as great per acre for the irrigated cotton as compared to the dry land cotton in ginned lint.

Conclusions. The greatest difference in the dry land and irrigated tests was in the amount of cotton produced. A yield of better than three to one in favor of the irrigated cotton demonstrates the tremendous difference in plant development brought about by additional water. The low yield of the dry land cotton indicates these plants were under considerable stress for water, a condition which should influence fiber properties, if adding water by irrigation has a great effect on fiber development.

Regardless of this wide difference in yield between the dry land and irrigated cottons, the percentage of lint from seed cotton has remained the same for both tests. Since this measure of lint from seed cotton was an indication of



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The crane-mounted blower travels above the long rows of looms preventing accumulation of lint on arches, harness, heddles and drop wires – with a high velocity fan cleaning the ceiling as well. At the end of a row, the cleaner moves over to the next row of looms while the crane reverses down the alley.

When warp beams or cloth must be moved, the cleaner crane is stopped to permit access of a hand-pushed crane along the same craneway.

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fiber development and was the same for both series, the question may be asked as to how great a difference in fiber properties should be expected.

Despite these tremendous yield differences the only physical property which may be considered significantly different was greater length for the irrigated cotton. The greater strength in the irrigated cotton yarn substantiates length differences in the irrigated cottons over the dry land cottons since other measurable properties were approximately equal.

There was evidence that irrigated cotton has more range of fineness within each variety brought about by coarse cotton from the first boll, to fine cotton as new growths come on from watering.

To substantiate this, there was a slightly lower average fineness and greater total waste from the irrigated cotton. Some of the extra waste, no doubt, comes from greater foliage; however, card waste was also higher for the irrigated cotton.

The percentage of lint from the seed cotton being the same for both irrigated and dry land cotton, indicates that the plant will sacrifice nearly any part of the plant before it will take away from the lint in the boll. In nature, one of the first requirements of the plant is to reproduce itself. As a result, the cotton plant will make every effort to fully develop as many bolls as possible in order to have mature seed for reproduction.

Along with the seed, lint will be developed to the fullest maturity in keeping with growth conditions. The ability of the cotton plant to compensate for too much or too little water by growth limitations, reducing or increasing foliage or fruiting bodies to meet the plant's most normal requirements, may be a good explanation why greater differences in fiber properties were not found.

Most of the varieties in this test were developed for the High Plains area of West Texas. The cotton must of necessity be kept fairly short to develop maximum maturity because of the short growing season and water limitations. The measured differences between varieties is considerably greater than the measured differences brought about by irrigation. An additional factor, which must be considered along with water, was environment. Cottons grown in the northern part of the cotton belt could show greater effects of underdevelopment than the irrigation effects.

The conclusions drawn from these tests are that irrigation has in no way impaired the measured fiber properties and has added to the spinning performance by giving a better yarn strength.

The evidence indicates that variety and environment in this area play a greater part than irrigation in producing cotton properties which may give difficulties in processing.

ACKNOWLEDGMENT. The authors wish to gratefully acknowledge cooperation of The Texas Agricultural Experiment Station, No. 8, Lubbock, Texas, under the direction of Don Jones for making samples available and supplying pertinent data for this manuscript.

Vinyl-Coated Fiberglas Yarns Said to be More Flex and Abrasion Resistant

A new basic textile is vinyl-coated Fiberglas yarn, according to Richard C. Horton of Owens-Corning Fiberglas Corp., who addressed the American Association for Textile Technology, Inc., on the subject. The glass fibers now are more flex and abrasion resistant. Present capacity of the industry is estimated to be over three million pounds of coated yarn per year.

The coated yarns are produced by pulling continuous filament Fiberglas yarns at constant speed through a bath of polyvinylchloride plastisol or organosol, through a suitable wiping die, and then through an oven capable of heating the coating to the fusion temperature of 350 F. Resin pickup varies between 50% by weight on fine yarns to 35% on heavy cords.

The Fiberglas yarns used are treated with organic water repellents to insure high wet strength and an organophilic surface to improve adhesion of the vinyl coating. Fine yarns are sized with a stearato chromic chloride complex during manufacture, while heavier yarns are treated with hexadecyltrichlorosilane as a predip in the coating sequence.

Yarns in volume production range in diameter from 13 mils to 61 mils; in yardage from 3500 yards per pound to 145 yards per pound; in strength from 10 pounds tensile to 165 pounds. Pilot quantities of yarns ranging from 3 mils to 10 mils are being made available.

The vinyl-coated glass yarns combine the properties of high tensile strength, dimensional stability, heat and flame resistance, color stability, low temperature flexibility, resistance to a wide range of chemicals, rust and corrosion resistance, good textile processing characteristics, heat sealability, and low cost.

The yarns are said to be satisfactory for use in woven insect screening, the present largest poundage application. The yarns are under evaluation in outdoor furniture upholstery and automotive seat cover fabrics.

Other end uses in the development stage include tobacco shade cloth, luggage fabric, awnings, curtains, and draperies. The electrical industry is using coated yarns in wire and cable coverings, as tying cord, and as tracer yarns. The rubber industry has announced the use of vinyl-coated Fiberglas yarn as the reinforcing fill in woven fire hose jacket.

Vinyl film manufacturers are using open fabrics woven from these yarns to add dimensional stability to the films. A staple form is useful both as a binder and reinforcement in felted products. The most unusual application announced is the use of vinyl coated yarn as netting in lobster nets.

Claims are that with new techniques for coating and handling the material, it will be one of the lowest priced textiles. The major problem is the lack of chemicals designed for it.

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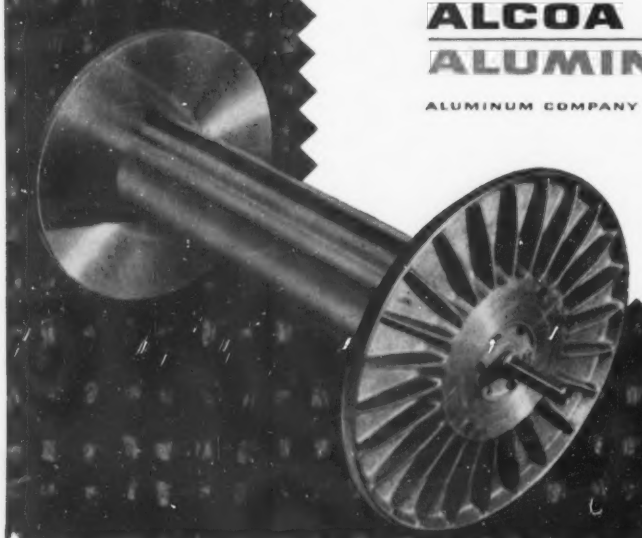

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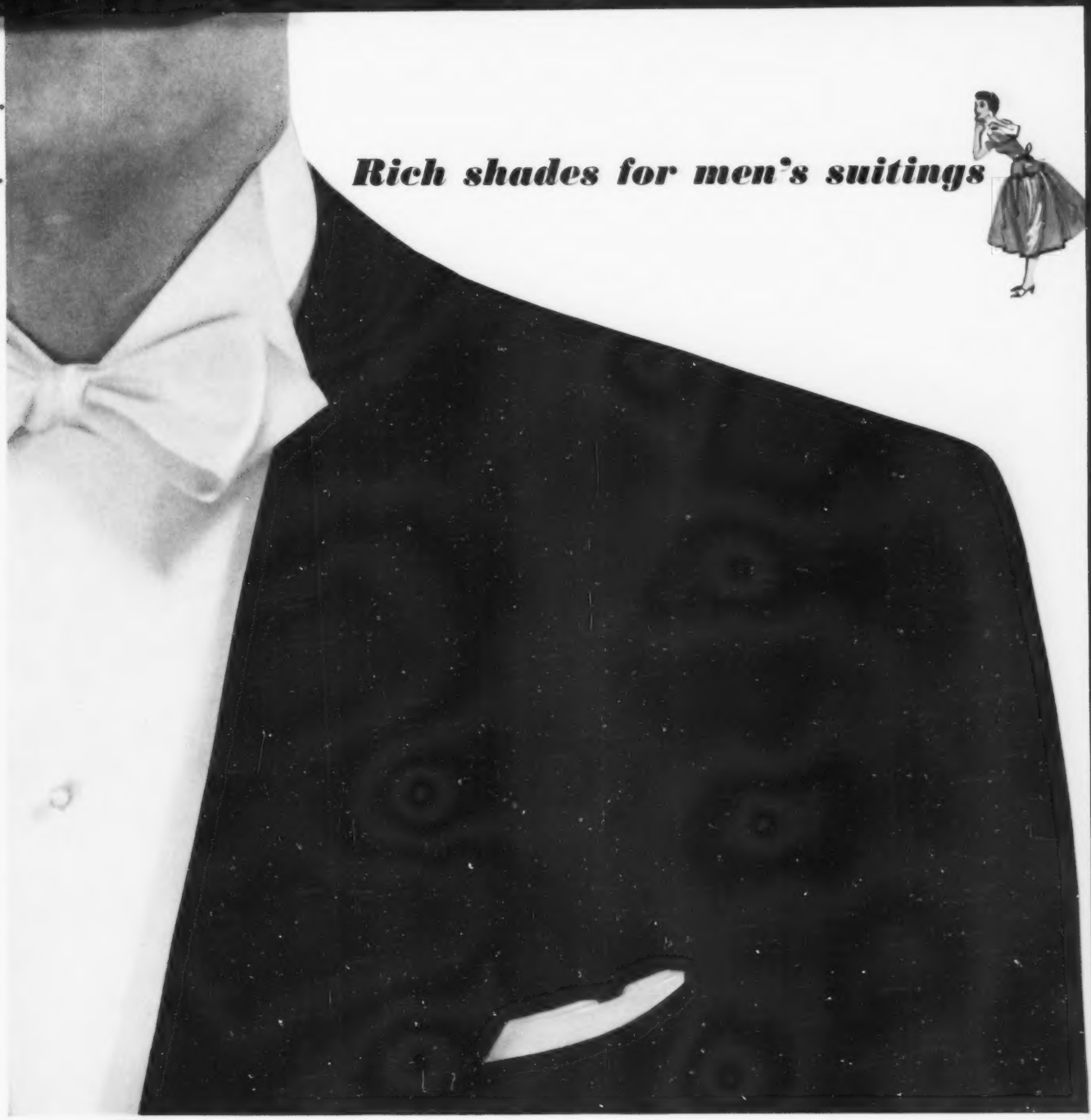

New wide range of colors for "DACRON"*- wool blends

Du Pont Dyes

DU PONT

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BETTER THINGS FOR BETTER LIVING—*THROUGH CHEMISTRY*

For coloring the "DACRON" polyester fiber component of "DACRON"-and-wool blends, Du Pont has developed a new line of dispersed dyes—the "LATYL"* colors. These dyes make possible a wide range of well-accepted colors for men's wear. Because the "LATYL" dyes have a minimum staining effect on wool, they are especially well suited for union and piece dyeing blends of "DACRON" and wool commercially. And the "LATYL" colors are compatible with all dyes for wool.

Each new blend of wool with "DACRON", "ORLON" acrylic fiber, or other synthetic fibers has posed new dyeing problems. Working with manufacturers at their mills, Du Pont's technical service experts have called upon past experience and constant research to help set up dyeing procedures and formulas for these blends.

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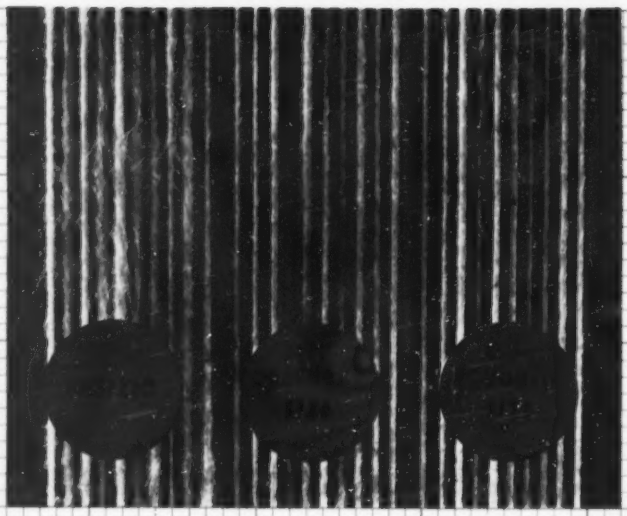

How to get Better Warps with Less Size Softener

This photomicrograph gives you visual proof of the improved fibre lay you get with Houghton's powdered Houghto-Size. And if this were the only benefit you got, Houghto-Size would still save you money through greater weave-room efficiency.

But Houghto-Size 475 does more than that—*it also saves on the amount of size softener you need!* Here's proof:

A prominent North Carolina mill used only 10 lbs. of Houghto-Size 475 and 150 lbs. of thin boiling starch to make 135 gallons of finished size. This replaced a formula that required 10 lbs. of wax, 40 lbs. of gum and 200 lbs. of starch. Shedding was greatly reduced, weaving efficiency increased.

Take advantage of such savings today—in your mill. Write, asking for a Size Check-up Test at no obligation to you. E. F. Houghton & Co., 303 W. Lehigh Avenue, Philadelphia 33, Pa.

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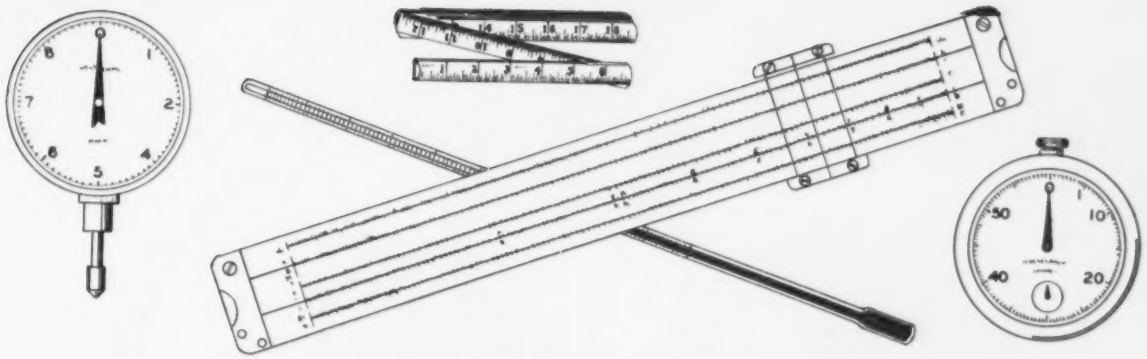


THE ENGINEER'S TOOLS

You can have too many! Profit by the experience of this finishing plant engineer.

By William O'Keefe

EXCLUSIVE

THE INSTRUMENTS that the engineering department of a finishing plant uses are intended to collect necessary information and disseminate it ultimately in the form of reports and drawings. The department needs satisfactory equipment for this, but there is a point of diminishing returns beyond which money is wasted, and this article reflects the experience of one large rayon piece dyeing and finishing plant.

Departmental work requiring equipment is of two classes; measuring and drafting. For measuring and subsequent calculating, the following are indispensable:

(1) **Ruler.** The elementary measuring device is a ruler six to ten feet long. Folding wood rulers are bulkier than metal ones but they can be extended farther vertically and they conduct less electricity. In addition, a resourceful user can make a crude calipers out of a folding wood rule.

(2) **Stop Watch.** Next most important is a time interval recorder or stop watch. This is useful for machine speeds and operation timing. If a roll diameter or its circumference and its rotational speed are known, cloth speed can be found, although occasionally slippage is overlooked.

(3) **Tachometer.** Because it is nearly impossible to count revolutions if a shaft speed is above 300 rpm, a tachometer is necessary for fans and motors. A good choice is one that holds its reading after removal from the rotating shaft. Many of these tachometers will count yards per minute by employing an attachable wheel. If the department buys such an instrument, the stop watch is not needed for this particular purpose, but its other uses still make it necessary, since questions constantly arise about cloth time in a machine, short lines in dye becks, etc.

(4) A **mercury thermometer** in a wood or metal guard, with a range of 0 F to 220 F is cheap and is useful in all finishing plant tests involving heat. Most dyehouses have several of these thermometers.

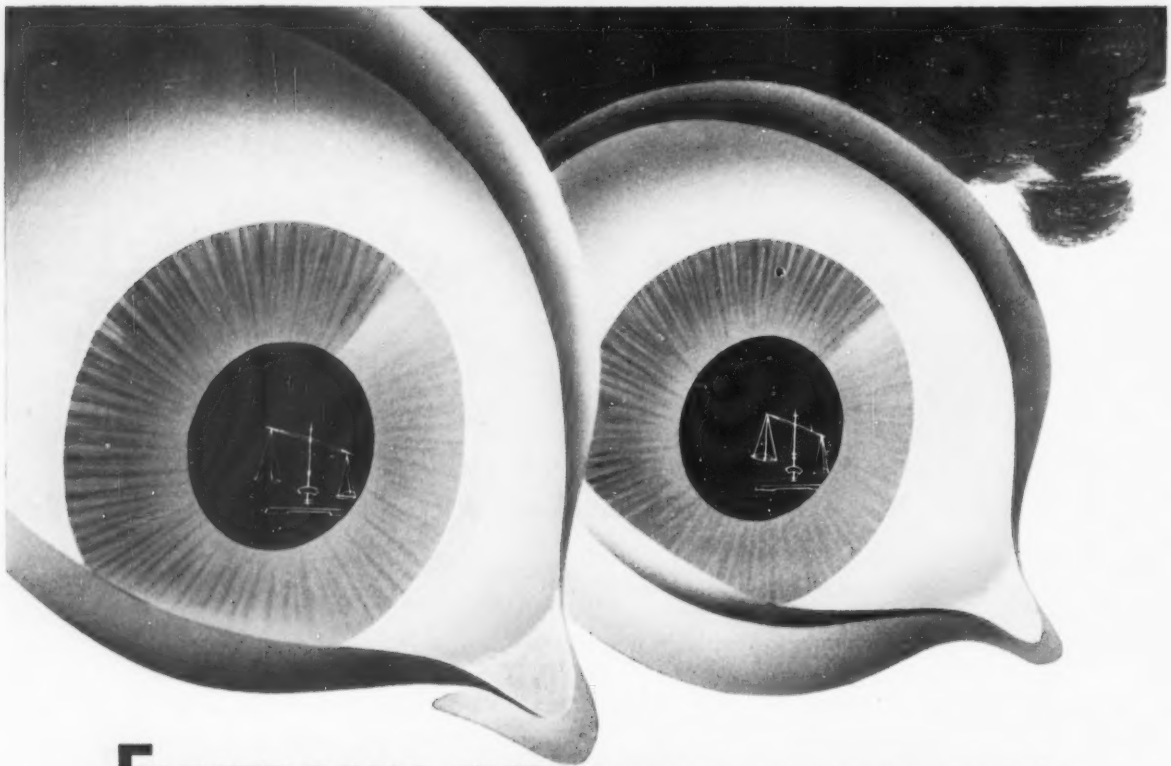
(5) A **slide rule** is another necessity. The simplest form of rule is the best. It is just not worth the money to buy a lot of extra scales on a rule for this kind of service. The ten-inch and five-inch sizes are both good. Data are not collected to such a degree of accuracy to warrant the larger size slide rules that are available.

The five items listed are sufficient for practically all measuring and testing, provided the chemists, maintenance, and laboratory people help out now and then by lending items of common use, such as weigh scales, micrometers, dial indicators, and ammeters.

Buy These Instruments Only if Conditions Justify. All further purchases, such as those listed below, should be carefully considered and made only if they are justified by reasons such as these:

a. A safety hazard exists unless a necessary measurement is made with an expensive instrument instead of a simple one. (Example: a dial thermometer with a long capillary tube could reduce scalding hazard in getting temperatures inside dye tubs.)

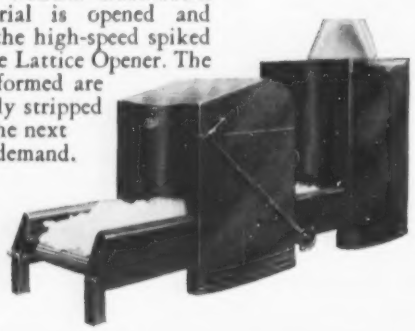
b. The possible saving (not total money involved) is much greater than the cost of the instrument. (Example: There would be no justification for buying a level solely to insure that a group of expensive pumps in a pump house were set at exactly the same elevation. The level might not cost a thousandth part of the pumps but there is no possible saving com-

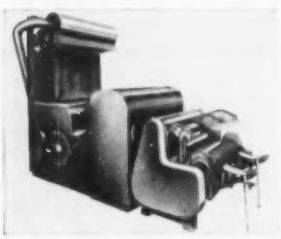


ELECTRONIC EYES (SEEN AT ATLANTIC CITY) CONTROL THE BLENDING OF SYNTHETICS

World's first line of machinery designed for blending rayon and synthetics achieves 0.7% accuracy

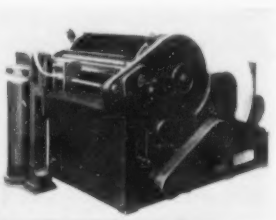
WITHOUT FIBER DAMAGE baled material is opened and combed on the high-speed spiked lattice of the Lattice Opener. The small tufts formed are pneumatically stripped and fed to the next machine on demand.





INTENSIVE OPENER'S electronic eye controls the delivery from the Blending Machine. A Licker-In type beater is pneumatically stripped and the fibers are condensed to build a sheet which is calendared into a uniform undamaged lap.

PARALLELIZED SLIVER, appearing to have already been once through a drawing frame, is formed by the unique carding action of the Lap Converter. Final blending accuracy is 0.7% with a waste loss of apx. 0.25%. Full data is available.



FOUR METERING CHUTES of the Blending Machine, with electronic eyes, control the feeding of the constituent fibers from each of the lattice openers. Delivery rollers on each chute meter the required amount of fibers to hold the blend constant in the next machine.

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mensurate with its cost. In these cases a deaf ear must be turned to such arguments as "doing the job right," "begrudging a few dollars," and "being pennywise.")

c. The proposed instrument will decide if expensive production machinery is meeting its specifications. (Example: a Shore durometer for rubber roll hardness.)

d. The proposed instrument is part of a definite research plan already decided to have attractive possibilities. (Example: a potentiometer to study operation of dryers.)

e. Necessary services now hired outside can be performed more economically by a works-owned piece of equipment. (Example: a blueprint machine.)

A man with special skills tends to bring his skills to bear on the finishing works' particular problems and sometimes he gets carried away by an uncontrollable nostalgia for a costly instrument that he previously used. Former surveyors love to work with transits, for instance.

These May Be Helpful. The following are possibilities for finishing plants' engineering departments:

(6) **Yardage Counter.** Using a hand yardage counter, which costs about $36, is more convenient than calculating speeds from a revolution and diameter measurement, and if the plant tachometer has no yardage counting wheel, this is a good buy for all but the smallest plants.

(7) **Measuring Tapes.** Additional types of measuring tapes are handy. A flexible six-foot tape for measuring around rolls and a 50 or 100-foot steel tape for long distances are used most. It is astonishing to see what a tiny amount of wear on a rubber padder roll will show up with a carefully used flexible tape. Such a tape will also keep watch on the cloth-measuring rolls that tell how much yardage is to be billed.

(8) **Durometer.** The Shore durometer measures hardness of rubber rolls accurately enough for mill purposes, and it is worth the serious consideration of a larger plant having many rubber rolls. Its owner can compare roll coverings and can discover certain kinds of damage not readily apparent to other inspection methods. It costs about $55.

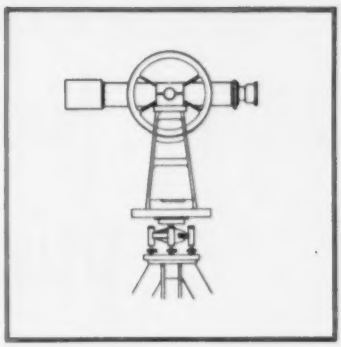
(9) **Thermometers.** The thermometer problem varies from mill to mill. Where many machines employ high air temperatures, a gas or liquid filled dial thermometer with a flexible capillary can act as a check on machine-mounted thermometers. A mercury-in-glass maximum-reading thermometer can be very satisfactory for checking and for general measurement if its user is skillful.

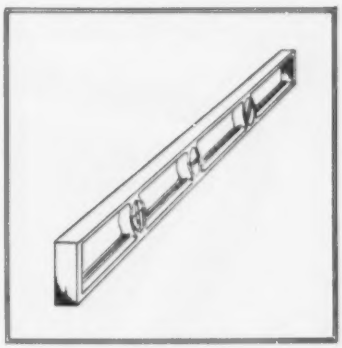
Where work is done in narrow temperature ranges, such as boiling point vicinities, a calibrated thermometer is advisable. It costs about $20. If a mill has many dry cans or cooling rolls a surface pyrometer or roll-type thermometer is recommended. These vary greatly in design and cost. The most highly developed ones are, of course, high-priced and are usually intended to be mounted permanently on a machine or are too fragile for consideration.

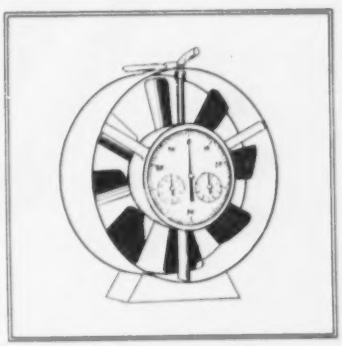
Hygrometer. A hygrometer or wet-and-dry bulb thermometer is rarely needed. Most large scale air conditioning installations have their own instruments. In studying low temperature drying, a hygrometer is sometimes used.

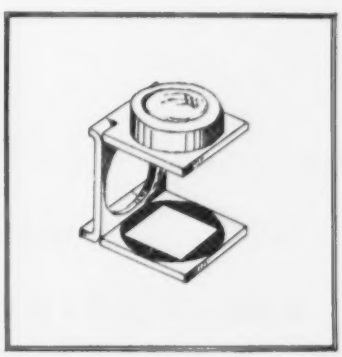
(10) **Levels and Transits.** Larger plants, especially those with irregular ground forms and extensive water and drainage systems, should have some form of level, but any plant that buys a transit should investigate the requirements for such an instrument. A level serves to set floors and long machines and to determine fluid heads. An architect's level, costing about $180, will do, especially if there is no one who is experienced at leveling. An engineer's level costs about $370. As a rod, a tape on a stick will serve, but a Philadelphia rod is distinctly better.

The transit is used infrequently; few plants need surveying and unless the instrument user is a licensed surveyor, no one will believe him anyway when it comes to property line determinations. I recall a coal pile measurement and an ash pond mapping as the only plant conducted transit work in the past six years. In the same time a









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level was used on three large scale floor pavings, four drainage questions, one pipeline routing, a flood control problem, three extensive machinery installations, and a rail siding grade determination. For the last-mentioned work, horizontal distances were taken from a mill map with sufficient accuracy.

Hand Levels. Sometimes people think that a small hand level is desirable for approximate elevation determination; the low cost is attractive. However, any money spent for such an instrument is totally wasted because of the inaccuracy of these levels. They are designed for rough mapping and estimating, and on the close decisions usually required in mills they just do not give a sure answer. If an emergency job comes up, get a carpenter's level and sight along the top; the result will be no worse than the product of the hand level.

(11) **Anemometer.** For drying and ventilating work an anemometer is useful for extensive investigations, but again if no one is going to use it frequently don't waste the money, which is about $70.

(12) **Magnifying Glasses.** A small magnifying glass, pick counter, or a magnifying doublet is good for examining cloth damage or roll surfaces. Usually the engineer can borrow such a magnifier from dyers or finishers.

(13) **Scales.** A scale balance will weigh small patches of cloth cut during evaporation tests. A new triple beam balance costs about $23 and it is advisable to borrow one from the laboratory if possible, unless protracted work is planned. Larger portable scales with capacities up to 2000 pounds for weighing whole lots are invariably out of the question and customarily the cloth lots are taken to a scale in a permanent installation.

(14) **Stethoscopes.** A "stethoscope" can be a small steel rod held to the ear. It costs nothing and occasionally gives valuable hints on how traps and check valves are working.

(15) A **pitot tube** will measure air flow in ducts and dryers, but a certain amount of skill is necessary to get accurate results with it. Generally it is out of the question for finishing plants unless one man has sufficient skill, time, and enthusiasm to do a thorough job with it.

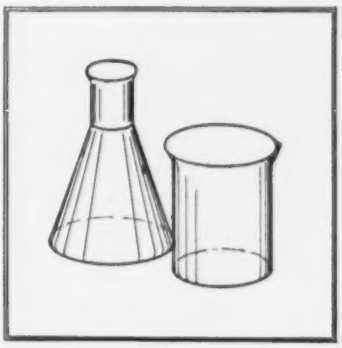
(16) **Vibrometers** have limited use in connection with fan and high speed shaft troubles. A good deal of theoretical and technical knowledge is a requisite to their correct use and to the interpretation of results. The average finishing plant will never have anyone who can make real use of such a gauge.

(17) **Potentiometers** for temperature measurement are expensive and almost always there is another way to get a desired temperature. However, they seem to hold a strange fascination for chemists and production personnel in finishing plants, and sometimes in large mills these people will buy one; then a friendly engineer can borrow it after the novelty has worn off.

(18) **Water Analysis.** Instruments and equipment for water analysis are rarely used by a plant engineering department, and the mere possession of them will not often create interest in problems which are left to either the chemists or to someone in the steam plant. Boiler feedwater treatment systems require at least a hardness testing kit, and there are few engineering departments that have any more curiosity about process water than could be gratified by such a kit. Until such an attitude, right or wrong, changes, there is no reason for buying more water testing equipment.

Drafting. For drafting and plotting graphs, besides the absolute necessities of T-square, triangles, compass, and scale, the following are always worth buying: a lettering triangle which is desirable for ruling letter lines, a French curve for connecting points on a graph as well as making neat drawing curves, and a metal erasing shield.

Another useful small device is a measuring wheel reading in inches. It will give a check on belt and print machine blanket lengths, amount of cloth in agers, dyeing ranges, and dryers, and route lengths on works maps and plans. It is not essential, but nevertheless of constant convenience.



A planimeter is rarely worth its cost. It is infrequently useful for meter chart work. Very rarely a beam compass is needed for large circles; it is better to use a crude expedient occasionally than to buy one and have it lie idle for years. However a pair of Copenhagen ship curves, costing very little, are good for drawing curved lines through points of a plotted graph.

Paper. Besides drawing paper of

How they keep quill winding under their thumb at the Jean Ribbon Mills, Inc.

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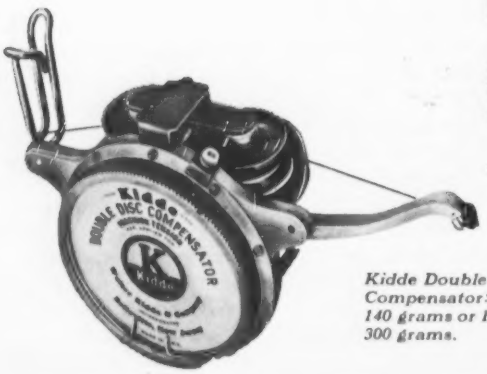

Kidde Double Disc Compensator: 10 to 140 grams or 100 to 300 grams.

Kidde

Walter Kidde & Company, Inc.
390 Main Street, Belleville 9, N. J.

a good quality, certain kinds of graph paper are needed. There are two kinds in common use for this work. One has faint lines ruled 8 to the inch on letter size transparent paper. The ruling is not precise but is adequate for general use. The paper blueprints, but the ruled lines show only faintly. This paper is good for freehand scale drawings and for graphs to accompany reports.

The other graph paper is more accurately ruled in green, orange, or brown, 10 lines to the inch either on rolls of paper about 26 inches wide or on large single sheets. It serves for accurate work of all kinds; graphs, profiles, maps, etc. It is usually too opaque to blueprint. The division of 10 lines to the inch is better than millimeter ruling for the types of work done in finishing plant engineering departments.

These two graph papers will do for any conceivable work that the department may do. It is a waste of money in nearly every instance to buy special papers such as profile or semi-log paper. As far as semi-log paper is concerned, most finishing plant laboratories have it for certain testing work and they can spare a sheet or two.

An adding machine sometimes is desirable, but unless there is a large amount of engineering department records and accounting there is no justification for spending the money as long as there are machines in other departments.

Blueprinting and photocopying machines are rare in finishing plant engineering departments. A good case can sometimes be made out for a simple blueprinter for a large plant, and at times a smaller plant can get a used machine at an attractive price. Occasionally a mill's management will decide to buy a photocopying machine. Once a machine like this arrives, all worries are over. If the thing ever wears out it will be replaced immediately so that it can continue to copy birth certificates, Army discharge papers, and house plans.

Books. Certain books are necessary; others are not. Three desirable handbooks are those concerning mechanical engineering, machine shop practice, and chemical engineering. Electrical engineering and building handbooks are next. Don't spend money on books that cover subjects which are sufficiently well described in the handbooks. For example, the handbooks are thorough enough on reinforced concrete construction for nearly every job around a mill. Special books on this subject may be of great value to civil engineering specialists, but lack any unique value to plant engineers in finishing works.

Manufacturers publish catalogs and reference works of great value and distribute them pretty much gratis. A few of the best contain special information that would cost hundreds of dollars if collected in published books.

Before buying a new instrument, make sure that the job cannot be done safely and cheaply by an old instrument and a little ingenuity and patience. It is not only an economic and patriotic duty, but it should be a source of pride to any engineer that he can make the older, simpler piece of equipment do the job. Isaac Newton is supposed to have worked out the law of gravity after being struck by an object as simple as a falling apple. The authenticity of this story may be doubtful, but if true, we can be assured that it wasn't a stainless steel apple or one with radioactive atoms that started Isaac's train of thought.

Each Cotton Mill Must Determine Its Best Micronaire Blend

The mill which runs a number of yarns and mixes is fortunate from the point of view of cotton selection, as its requirements can be much more flexible.

The mill running only one mix is in a more difficult position. It is unable to use as broad a range of cottons, but if its specifications become too rigid, the price of its cotton will increase. Therefore it is essential to work out a blending program with as much tolerance as practical to insure an even running mix.

For example, consider a carded yarn mill running 20s yarn and using 1 1/32" cotton. After a careful check of the cotton received over a period of two years it was found that the average Micronaire reading was 4.4. In addition, it was found by experiments that when cotton with a Micronaire reading below 4.0 was used in large proportions the neps in the finished cloth became excessive. In order to eliminate fluctuations in cloth quality, it was decided to set up a mix of controlled Micronaire reading with the majority of the cotton in the medium range (4.0 to 5.0) and with small percentages of coarse (5.0 and better) and fine (below 4.0) cotton. Results proved this mix to be satisfactory, resulting in an evener running quality of cloth.

A system was developed, whereby each bale was Micronaired as received and used in the mix according to its classification of fine, medium or coarse. It was found that variations in the average Micronaire reading of the medium range cotton (4.0 to 5.0) had little effect on either spinnability or cloth quality, but that small variations in the amount of coarse cotton had an adverse effect on ends down, while small variations in the amount of fine cotton not only affected neps in cloth but also ends down in spinning. It was, therefore, decided to buy cotton on a guaranteed Micronaire specification of nothing below 4.0.

The question of what Micronaire blend is best for a given yarn organization or plant is one which must be worked out by the individual mill.

In addition to presenting problems in ends down and neps, variations in Micronaire readings produce variations in dye affinity, resulting in streaky dyeing or filling bars in dyed cloth.

Extracted from paper entitled "Problems in Selecting and Purchasing Cotton of Improved Fiber Properties," presented by Lindsay Dexter of Pepperell Mfg. Co., Boston, Mass., before the tenth Cotton Spinner-Breeder Conference.

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Giant research and production facilities of Monsanto Plastics Division make possible unequalled service to textile finishers

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New Application Research Center, to cost $1¼ million, will provide the finest modern facilities for Monsanto technicians. Here they will work closely with customers on applications and products for tomorrow's markets.

EXCLUSIVE

1953 - year of prosperity?

By Ringgold Arden

WE SAW by the papers that 1953 was the year of greatest prosperity this country had ever known. This was good news. It was a quiet, unobtrusive sort of prosperity, which we in the textile industry hardly noticed. It also trod softly as it passed through the farm belt.

The newspapers were lavish in their descriptions of how this, that, and the other phase of our economy had reached a new high, but oddly enough, little was said about the fact that the national debt had also reached a new high and was banging against its ceiling so that plans were afoot for raising this. There were glowing accounts of how this, that, and the other business had sold more stuff and made more money than ever before, but the nation's biggest business didn't make any money, but went in the hole to the tune of several billions of dollars. It seemed to be a case of the subsidiaries doing famously, but the parent company, which was putting up the money, having to look around to see where it could borrow some more to add to an already unwieldly burden of debt.

There used to be an old-fashioned horse-and-buggy notion abroad that years of prosperity were good times to reduce your indebtedness, and people who lent money took a dim view of folks not being able to pay a little something down on the note when they were bragging about how much money they had made. It would have given an old-fashioned banker a double set of ulcers to have some bird come in bragging out of one side of his mouth about his big volume of business and his bloated profits, and asking out of the other for a loan to tide him over the next few months. Old-fashioned, sound banking has, however, gone the way of the dodo and the horse and buggy, and the new style finance measures your prosperity by the size of your debt.

The people currently in charge of our Federal Government were handed last year probably the toughest problems that have ever been turned over to an incoming president and his advisors. A leading problem was how to have the Federal Government keep on guaranteeing everybody's prosperity by creating more inflation and without going broke, or how to return to the Constitutional idea of letting people guarantee their own prosperity.

Back in 1933, the Federal Government adopted an entirely new set of policies which had never seriously been advocated by responsible members of the government in this country before. One of these policies stated that the Federal Government was directly responsible for maintaining general prosperity, and also responsible for bailing out of debt those who had imprudently undertaken too much of it.

If a man had enthusiastically bought a more expensive house than he could afford, the Government was supposed to see that he didn't lose it through failure to meet his payments. If a man who couldn't afford one automobile had bought two, the Government was supposed to keep him from losing either of them. If somebody, farmer or city man, had speculated in land and got hooked, the Government was supposed to come to his rescue. If a man who had been earning good wages for many years had been improvident enough to spend all, and save nothing, his thrifty neighbors were supposed to be taxed to ameliorate the indigence that he had brought upon himself.

The Federal Government has followed just about that sort of policy for more than 20 years, and during the past few of these it has been very difficult to tell whether we were prosperous or whether we weren't. We have certainly had the semblance of prosperity for a good many years, but it is hard for a horse-and-buggy type economist to recognize more than the "semblance" in a prosperity which rests chiefly on the Bureau of Printing and Engraving.

This semblance of prosperity can be brought about any time by public expenditures for anything. If the Federal Government should spend in one year 100 billion dollars to pay people all over the United States for hauling stones to Washington to be heaped up in a huge pile and labeled, "Monument to Inflation," we would get the same kind of fictitious prosperity out of this idiotic performance that we would out of spending money for anything else which does not add something to the volume of goods and services available to the people.

The Federal Government is now hopefully planning to extensively economize and to reduce taxes, but the heads of the Government are finding out, where they didn't realize it before, that tax reduction is a problem involving lowering a man's taxes without reducing the

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First Wool Combing Plant in South

A $3,000,000 wool combing plant is being constructed on the south bank of Lynches River one mile north of Johnsonville, S. C., by Nichols & Company, Inc., according to a joint announcement by the Boston, Mass., top maker's president, Arthur O. Wellman, and L. W. Bishop, director of the Research, Planning, and Development Board of the State of South Carolina.

To be known as the Wellman Combing Company, the plant will scour the raw wool, card and comb it, and produce tops for consumption by worsted spinning plants in the southeast. About 20,000,000 pounds of wool per year will be processed in the first unit which will employ 250 persons or more. Eventually, production of 80,000,000 pounds per year is anticipated.

The building, of one-story, modern design with air conditioning throughout, will contain approximately 150,000 sq ft of floor space. It is expected to be ready for occupancy by July 1 of this year.

Looking toward importation of raw wool from world markets, the Port of Charleston already has provided ample storage space and a fumigation plant, and the U. S. Department of Commerce has provided inspection facilities.

Commenting on the project, Mr. Wellman said the Johnsonville site was chosen because of its ample supply of pure, soft water, a plentiful number of available personnel, and its nearness to the Port of Charleston on a direct line of the Seaboard Railway.

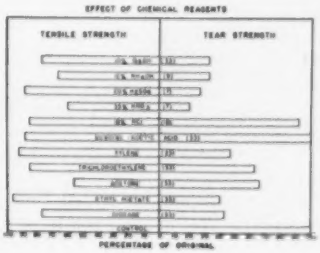
Du Pont's "Mylar" Film Has Many Textile Applications

Du Pont's new "Mylar" polyester film can be used as a base for metallic yarn, a supporting yarn, a surfacing material for metalizing and fabric laminations, a leader material for dyeing and finishing operations, and for other textile applications, the American Association for Textile Technology was told recently.

Addressing a special meeting of the Association, John R. Mitchell, a technical representative of the Du Pont Film Department, said the film's high tensile strength, thermal stability, and resistance to chemical attack, make it an excellent base for metallic yarn. He said that "Mylar," which has no plasticizer, will not dry out or become embrittled with age.

Although the new polyester film is chemically similar to "Dacron" polyester fiber, it is in no sense a fiber itself. "Mylar" is made in continuous sheet form, while "Dacron" is extruded as a filament.

According to Mr. Mitchell,



"Mylar" in metallic yarn form is made by adhering, or laminating, a wide web of the film to both sides of aluminum foil with a clear adhesive. If a yellow orange color is added to the adhesive, a brilliant gold effect is created. Depending on the color in the adhesive, he said, a wide variety of colored materials may be obtained. When these film-foil-film laminations are then slit into very narrow widths, the result is metallic yarn.

Pointing out that colored yarns also can be made by dyeing, he said that a cotton and rayon fabric containing metallic yarn made from "Mylar" could be dyed without coloring

(Continued on page 188)

benefits he receives from the expenditure of somebody else's taxes. It is all right to talk about Government economizing, but the instant any of it is put into effect, many persons are hurt, and loudly voice their resentment about the injury.

There is no economizing possible for the National Government without canceling a lot of plans to spend money where millions of people desperately want it spent, and without firing several million persons already on jobs where they are either not needed, or are only doing one-half or one-fourth as much as they could do if they wanted to.

We have been through a period of more than 20 years when the wasting of Government money was a virtue. It produced the fiction of prosperity all over the country, and it made the people in hundreds, or perhaps thousands, of communities proud and happy about the fine government installations that had been put up in their neighborhoods, and the big flow of government cash that would pour into their towns indefinitely. By some peculiar quirk of human nature, no thought was ever given to the flow of cash out of the town that had to be sent to Washington so that it could come back again.

Of course, much of the flow of cash out of the community was in the form of loans rather than taxes, and so the deluded people were convinced that at last they were able to eat their cake and have it too. They could lend their money to Government, and at interest, and the generous Government would then turn around and pay them the money for goods or services, and all too frequently without quibbling about the prices.

Even the most persuasive politician had better not risk his future by trying to convince those dependent on the textile industry that 1953 was a year of fabulous prosperity. In fact, things got so tough last year that one segment

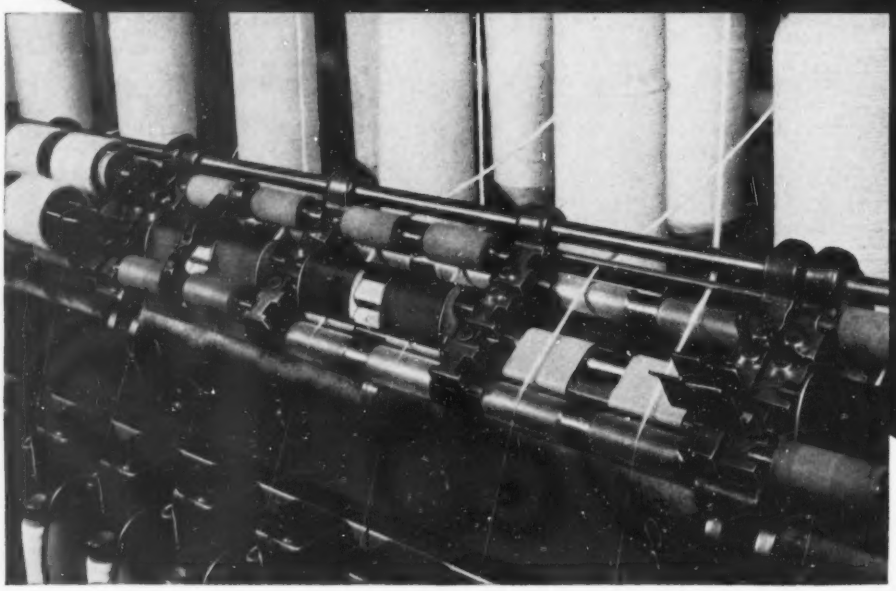
SACO-LOWELL *Duo-Roth*—

A DRAFTING SYSTEM COMBINING ALL THE QUALITY BUILDING AND COST SAVING ADVANTAGES OF THE SINGLE AND DOUBLE BELT SYSTEMS.

1. The long, thin, flexible bottom apron passes the nose of the apron bar with a small radius of curvature in a manner which allows a close setting between the nip of the aprons and nip of the front roll, a condition necessary for the most efficient fiber control in the final drafting zone.

2. Without exception, mills using the Duo-Roth System have increased their drafts as much as 50 to 100 per cent, and at the same time have produced a yarn of greater strength and evenness.

3. The greater strength and evenness is vividly shown in a Duo-Roth installation producing 21's yarn from .75 hank single roving, employing a 4.52 twist multiple—the break factor secured is 2339. Previously, the same frames running regular drafting were producing 21's yarn from 1.50 hank single. With same twist multiple highest break factor obtainable was 2104.



4. Duo-Roth is cleaner; there is a reduction in clearer waste as the shorter fibres are efficiently controlled. After raising the draft from 19 on Roth to 33 on the Duo-Roth, one mill was able to extend the top roll cleaning period from 24 hours to 48 hours, on a three-shift basis. Another mill, with a 50 per cent increase in draft after changing to Duo-Roth, also extended the top roll cleaning period from 24 hours to 48 hours.

5. Duo-Roth was engineered to be a simple, quickly applied change-over to existing Roth installations. Mills having Roth frames in good condition will find that Duo-Roth will pay for itself in savings resulting from increased draft, reduced cleaning, improved operating conditions and smoother, stronger yarns.

6. Duo-Roth is the only double-apron drafting system which does not develop wear of the cage against the apron driving roll. The standard Duo-Roth middle top roll, driving the apron, is built with a stationary arbor. The cage rests against the stationary arbor, eliminating the possibility of cage wear — a common problem with other systems.

7. The knurled and polished surface of the Saco-Lowell Duo-Roth middle top roll creates a positive and uniform drive for the aprons. Since both of the driving bosses are tied together, there is no variation in the speed of the top roll aprons regardless of the bulk of the strand being drafted. There is no slip or hesitation to create unfavorable conditions in the principal drafting zone.

8. The Duo-Roth, with the adjustable cage is extremely flexible. The correct pressure to establish the necessary degree of fibre control for the most efficient drafting can be quickly attained through easy adjustments.

A BROCHURE FULLY DESCRIBING SACO-LOWELL DUO-ROTH IS AVAILABLE ON REQUEST. SACO-LOWELL ENGINEERS WILL ALSO BE GLAD TO ARRANGE A DEMONSTRATION.

TEXTILE MACHINERY EXHIBITION — ATLANTIC CITY — APRIL 26-30 1954 — AMERICAN ASSOCIATION

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of the textile industry appealed to the Federal Government to arbitrarily come to its rescue without any regard for whether it deserved rescuing or not.

One of the earliest ventures of the National Government in this socialistic paternalism was guaranteeing prosperity to the farmers at the expense of workers in urban communities. Then came a guarantee of prosperity to these urban workers by enacting minimum wage laws and installing a Social Security scheme, and offering to put them on relief when they couldn't find work. Being on relief is hardly classified as a state of prosperity, but this was a part of the general scheme. Now the circle seems to be closing when whole industries are supposed to be propped up by Government aid.

It is very difficult for us to tell how much real prosperity we have and how much inflation is mislabeled as prosperity. The United States, with the most inventive and productive people on earth, has steadily enjoyed an improvement in the standard of living which statisticians claim has progressed at the rate of about three per cent a year as far back as records go. This we have had, and would have had without any meddling by the Government and without any inflation of our national currency.

This improvement in our standard of living is as solid as Stone Mountain. It comes about from the activities of our inventors, scientists, design engineers, and the business men who are capable of putting the dreams of these other people into the hands of the public in some usable form. Nothing could interfere with the prosperity created by these things if people were left alone to trade amongst themselves on a competitive basis to exchange things which they can furnish, for other things which somebody else can furnish.

However, when a National Government arbitrarily decides that whether people are able to furnish anything in exchange or not, they must have the things that sociologists have declared are necessary for the kind of life a family ought to be able to lead in this kind of country, it has accepted an impossible obligation. A Government which sets out to put any such plan into effect will first rely on inflation. It will then fall back on higher and higher taxes. It must ultimately assume all authority over all national income. It can not be responsible for everybody's welfare unless it is in command of everybody's labor. It must be an authoritarian and completely tyrannical government.

A Government has no legitimate income of its own — it simply manipulates the incomes of its citizens. To really give something to one person or one group of persons, it must take that something from other persons. To do this openly would be admittedly to tax one group for the benefit of another, and that is so unpopular that it is necessary for the Government to resort to the subterfuge of inflation. This is the tax that robs you while pretending to give you something. It takes from everybody, and it frequently takes from the person who has been given something more than he has been given. He generally remains happy, however, so long as he thinks he is getting something for nothing, whether he is or not.

The National Debt is our "Monument to Inflation." It stands there, unpayable and apparently irreducible. If it has to go up during a year counted as being fabulously prosperous, it must go up even more in times of lesser prosperity. The socialists think this is a good thing. The higher the debt gets, the more unmanageable it becomes, and the sooner the socialists can take things over and institute the Russian type paradise they have been planning for us.

We dislike the prospect intensely.

More on Effect of Single and Ply Twists on Carded Yarn Properties

The effect of single and ply twists on the properties of a 15.5/2 carded cotton yarn was studied at the Southern Regional Research Laboratory, New Orleans, La., and a comparison made with the results of a similar study conducted on a 31/2 carded cotton yarn [see TI for Dec., 1953, page 114]. In addition, the properties of a single yarn (15.5/1) were compared to those of an equivalent 2-ply yarn (31/2).

Generally, the ply twist-strength curves for the 15.5/2 yarn were found to be similar to those of the 31/2 yarn. However, a change to a coarser yarn number caused definite differences in the twist level required for maximum strength and in the characteristics of the maximum strength plateaus.

The elongation characteristics of the 15.5/2 and 31/2 yarns were also very similar, but the elongation values for the coarser yarns were higher than for the finer yarns. With decreasing yarn number, low single twist yarns reacted less sensitively elongationwise to high ply twist.

For equivalent single and ply twist multiplier combinations, maximum ply yarn strength values were obtained with approximately the same twist combination for both the 15.5/2 and 31/2 yarns; elongation values increased as equivalent twist multiplier combinations increased with the rate of increase being greater for the coarser yarn.

For low and medium twist single yarns the percentage gain of ply over single yarn strength became less as the yarn became coarser. The equivalent ply yarn (31/2) was generally stronger and was, in most cases, lower in elongation than its single yarn counterpart (15.5/1). Ply yarn variability seemed to increase as the twist increased in the component single yarns.

Abstract of report of a study at SRRL by Louis A. Fiori, John J. Brown, and Jack E. Sands. Entitled "Effect of Single and Ply Twists on the Properties of a 15.5/2 Carded Cotton Yarn," it will appear in the March, 1954, issue of "Textile Research Journal," along with a study by the same authors of the effect of single and ply yarn twists on the properties of a 31/2 carded cotton yarn.

Check on this at American Textile Machinery Show

New Catalog of Textile Leathers Offered by Rhoads

You'll certainly want to pick up a copy of Rhoads' new Textile Leathers Catalog at Booths 352 and 352AA. This handy, compact booklet describes and illustrates their complete variety of Textile Leathers. These include 42 varieties of Check Straps; Binder Leathers; Harness and Jack Straps; Spindle Bumper Straps; Lug and Hold-Up Straps; Lattice Apron Leathers; Condenser Tapes; Flat and Round Beltings . . . plus information on how to order. *It's free* with the compliments of J. E. Rhoads and Sons.

C. R. Mitchell

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L. H. Schwoebel

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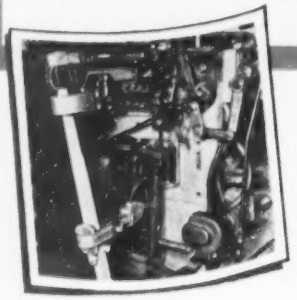
Scheduled to Greet Visitors at ATM Exhibition

Meet C. R. "Shorty" Mitchell and his capable staff of Textile Leather Specialists. These men are Southern Representatives for J. E. Rhoads and Sons Company, well-known manufacturer of Textile and Industrial Leathers. They'll be on board at Booths 352 and 352AA, ready and able to discuss your leather requirements. Why not stop in and get acquainted? They'll be delighted to see you.

Reports during the past 8 years indicate

Twice the Life

from Rhoads Tannate Special Check Straps



"We get *twice the life* from Tannate Special Checks!" This statement is not based on a few tests made on a limited number of looms out in some corner of some mill . . . it is based on the actual experience (reported to us during the past 8 years), of more than a dozen mills weaving all types of cloth on roughly 7,146 looms.

These mills were using Draper model E, X, X-2, XD and XP looms, as well as Hunt looms. They were running their looms anywhere from 150 to 200 picks per minute, on a 3 shift day, 6 days a week . . . They were weaving everything from sheetings to corduroys. They were comparing the performance of Tannate Special checks with all makes and shapes of straps. In every case they reported *twice the life from Tannate Special Checks* over anything they had ever used before.

So, no matter what kind of check straps you are now using, it will pay you to try Tannate Special Checks. See for yourself why so many mills insist on straps cut from this special leather, tanned only by J. E. Rhoads & Sons.

Tannate Special Leather is cut to meet your requirements in our patented BiCut design, straight or curved, all available in four different weights, three degrees of firmness. Endless checks also made from Tannate Special Leather are available, single or double ply, in two weights.

Visit our booth at the American Textile Machinery Exhibition. You'll find us in booths numbered 352 and 352AA. Get the complete story.

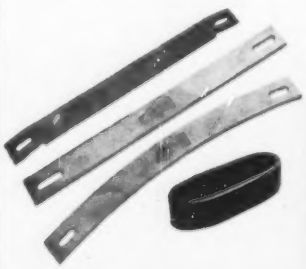


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TABLE 1. TEST CONDITIONS

Lot	Maximum Drying Temp., °F.	Drying Time, Seconds	Moisture Content at Press Box, %
W (no heat)	Not dried	0	6
X (low heat)	176	90	—
Y (excessive heat)	367	90	3
Z (excessive heat and recycled thru drying)	367	180	2

TABLE 2. WASTE

	W %	X —	Y %	Z %
Trash Content (Shirley Analyzer)	1.80	1.50	1.40	1.10
Opening	0.33	0.37	0.22	0.38
Picking	0.67	0.60	0.59	0.53
Carding	5.09	5.17	5.31	7.25
Total through Carding	6.09	6.14	6.12	8.16

TABLE 3. UNIFORMITY

	W N.U., %	X N.U., %	Y N.U., %	Z N.U., %
Lap				
Lengthwise	9.7	10.5	9.9	10.8
Crosswise	39.6	34.2	37.3	34.3
Sliver	27.7	26.3	23.5	24.2
Roving	51.0	55.6	57.6	59.4
Yarn (37s)*	114	120	119	125

*Normal N.U. of 37s at Joanna is 112%

TABLE 4. SPINNING PERFORMANCE

	W	X	Y	Z
Total spindles hrs. (X1000)	20.5	21.4	21.2	7.8
Total ends down	700	853	948	505
ED/MSH	34.1	39.6	44.7	65.1
ED/MSH, % std. mill rate	64.0	74.3	83.8	122.1
Break factor (37s)*	2060	1950	1922	1765

*Normal at Joanna for 37s is 2180.

TABLE 5. COST ANALYSIS OF TEST COTTONS[1]

Joanna Cotton Mills Co.

	Mill Standard	W	X	Y	Z
Spinner's assignment, sides[2]	22	25.8	24.1	23.4	19.3
Spinner's cost cents per lb of yarn[3]	—	2.43	2.53	2.61	3.09
Weaver's assignment, looms[4]	50	80	73	72	63
Loom stops per hour[5]	—	0.76	0.84	0.84	0.97
Weaver's cost cents per lb of cloth[6]	—	3.00	3.28	3.33	3.80
Waste cost, cents per lb of cloth					
Opening and picking	—	0.32	0.31	0.26	0.29
Carding	—	1.04	1.06	1.09	1.47
Total	—	1.36	1.37	1.35	1.76

1 Work loads for test cottons are theoretical maximum figures, determined from job studies. Mills normally use about 80% of this figure.
2 Filling, 136 spindles per side; warp, 110 spindles per side.
3 Spinner's cost only. Does not include doffers, supervision, overhead, etc.
4 Based on 39", 80 x 80, 4.00 print cloth.
5 All loom stops, warp and filling. Looms stop on all filling breaks.
6 Weaver's cost only. Does not include loom fixers, battery fillers, overhead, etc.

Mill costs *up*

Quality *down*

When Gins Over-Dry Cotton

Staff Report

SPINNERS and ginners from across the Cotton Belt gathered at Clinton, S. C., January 19 and 20, to examine the problems which mills are facing from cotton over-dried at the gin. The group met under the auspices of the National Cotton Council-sponsored Industrywide Committee on Cotton Quality.

Spinners' representatives outlined the adverse effects which over-dried cotton has on quality and production in the mills, and the ginners in turn briefed the conferees on the difficulties they meet in trying to satisfy both the mill and the cotton producer.

The agenda of the meeting included a tour of the Joanna Cotton Mills Co., where the ginners saw at first hand how costs go up and quality goes down when over-dried cotton is put into production (see tables).

Effects of Over-Drying. The ill effects of over-drying to which the mills are opposed were summed

Korzenik Reports on British Knitting Industry Research Facilities

Industry research was a matter of interest to all delegates to the First International Congress of Knitgoods Representatives held in Paris, France, last June, Sidney S. Korzenik, executive director and counsel of the National Knitted Outerwear Association, stated in his recent report on the Congress.

The British cooperative research organization for the knitting industries is known as the Hosiery and Allied Trades Research Association. (The word "hosiery" is synonomous with knitgoods in Britain, Mr. Korzenik explained.) Only those manufacturers who are interested in or who are in a position to benefit from research work contribute to its support; and, naturally, only contributors are entitled to its technical reports and other benefits.

Government-sponsored, the association is at present serving one-half the number of members of the NKOA, and they are concentrated in a relatively small area. For this work a staff of 50 is required, together with laboratories and equipment which occupy a building known as Thorneywood House in Nottingham. Technicians make no systematic visits to mills, but research projects originate in questions that are sometimes raised by members and in possibilities for useful study independently developed by the staff. Results are presented in publications distributed to members. These activities consume approximately $200,000 per year. Mr. Korzenik estimates that a comparable service in the United States would at the present time require a budget of at least twice that figure.

Work of the British organization is considerably facilitated by the existence of similar research organizations in allied trades such as the wool industry, cotton industry, synthetics, etc. If problems arise involving raw materials, touching for example on wool or cotton chemistry, liaison existing between the different associations enables the knitting research unit to enlist the resources, staff, and facilities of a cognate research organization toward solution of the knitgoods problem.

No routine tests are done for members; its work is exclusively research into manufacturing technology.

For such an organization to be successful, it requires a high capacity on the part of a substantial section of industry to appreciate research and apply its results directly to everyday operations; it requires a marked degree of technical knowledge in the participating mills for proper receptivity, Mr. Korzenik reasoned.

up by Harry Defore, Deering, Milliken & Co., Union, S. C., as a decrease in yarn strength and appearance grade; and increases in fiber length variation, amount of seed coat fragments in the lint, nep counts, manufacturing waste, and above all, ends down in spinning.

Last season, the mills advised producers and merchants in the Carolinas that over-dried cotton would not be accepted. As a result, spinnability was unusually high this past season for Carolina cotton.

For the Carolina practice of last season to become standard throughout all the cotton producing areas will require some changes from current practices in cotton merchandising. The skill of some cotton classers needs improvement; and classers for the arbitration board, board of cotton examiners, and for the loan must make a more critical evaluation of character or spinnability. The mills themselves must not be misled in buying by brightness and excellent preparation; and, finally, better quality seed cotton should be furnished to the gin.

Gin and Mill Tests. Preliminary results of a test designed to give concrete data on the effects of increasing amounts of over-drying were detailed by T. L. W. Bailey and W. J. Hart of the Institute of Textile Technology, Charlottesville, Va. This test is a follow-up of the "17-Mill Ginning-Spinning Test" (see TEXTILE INDUSTRIES, Oct., 1952, p. 111).

In the current test, four lots totaling 76 bales of 1 1/16" to 1 3/32" Deltapine 15 cotton were each ginned with different degrees of pre-drying. Lot "W" was ginned with no heat, lot "X" with low heat, and lot "Y" with excessive heat. Lot "Z" was also ginned with excessive heat, and was recycled through the drying process, as often happens with the overflow system used in many gins. Table 1 gives details.

These test cottons are now being spun at several mills. The spinning tests at Joanna Cotton Mills Co. are virtually complete. Preliminary results are given in Tables 2-4.

Effect of Over-Drying on Costs. J. L. Delany, Joanna Cotton Mills Co., Joanna, S. C., presented an analysis of the costs to the mill of running over-dried cottons, based on the tests run by Joanna for I.T.T. His analysis is summarized in Table 5.

Extrapolating from Joanna's present output and the costs of running the undried cotton, the added expense to this mill of running entirely on cotton ginned as in test "Z" would be $99,000 annually for spinners alone, and $120,000 for weavers alone. Mill men at the meeting estimated that about 15% of the crop is now over-dried in ginning, varying with local conditions.

Effect of Over-Drying on Fiber Properties. Dr. Hart explained that extremely over-dried cotton can be detected by changes in its fluorescence. However, the test is not quantitative, and no method has yet been developed for detecting small or medium amounts of over-drying.

Robert R. Coker, Coker's Pedigreed Seed Co., Hartsville, S. C., said that in his experience there is no change in the measurable fiber properties of cotton exposed for prolonged periods at 220 F. Cotton so treated does have a harsh hand, and is slightly shortened in staple.

TIPS ON METALLIC BREASTS

The Metallic Breast

Basically it consists of a breast cylinder and three workers and strippers in conjunction with feed rolls, lickerin, lump roll, tumbler and burr guards, as the case may be.

Functions

1. Opens up the stock by breaking up lumps, rags, hard ends, etc.
2. Helps eliminate foreign matter in the stock (trash, wood, etc.) which generally falls out while passing through the breast rolls.
3. Presents the stock to the breaker cylinder in an even and uniform manner.
4. Removes burrs, chaff, etc. when breast is so equipped.

Care of the Breast

1. Frequent stripping of metallic rolls with hand cards.
2. When rolls are loaded with dirt and grease, etc., it is then necessary to tool out the spaces between the wraps of wire.
3. When points of wire become bent and turned over, it is necessary to straighten them by use of an awl.
4. Dull points should be sharpened with special files, which are made for this purpose.
5. Have a schedule for cleaning, tooling out and setting metallic rolls. Settings should be checked at frequent intervals.
6. Check breast rolls to see if shafts are true (not sprung) or badly worn.

Metallic Wire Specifications (Woolen Breasts)

1. Number of points per linear inch — this generally varies from 4½ to 6 points.
2. Number of threads per inch — varies with type of covering (groove or surface covered):
   a. Groove Covered — Metallic roll is grooved a certain number of threads per inch (generally from 3 to 10 threads). Wire is set in grooves and caulked, to hold it in position. Depending on the condition of the roll it is sometimes necessary to re-cut these grooves, thus decreasing the diameter of the roll.
   b. Surface Covered — The surface of the roll is entirely smooth — wire is wrapped around roll with each succeeding wrap tightly wound against the preceding wrap. By using this method the original diameter of the roll is always maintained.
3. Types of Wire
   a. Hardened Point — This type is preferable as the points are actually hardened approximately 3/32" down from the tip, while the base still remains sufficiently pliable to conform to the contour of the roll, thus giving the mill better service and longer life.
   b. Regular Wire — not hardened — points will turn over more easily and will wear down faster than hardened point wire.

Relationship of Breast to Card Clothing

1. A metallic breast in *good repair* definitely increases the life of card clothing, by easing the load on the breaker card, thus giving better quality carding and, usually, increased capacity.
2. A metallic breast in *poor repair* allows a greater proportion of lumps, hard ends and trash, etc. to reach the breaker cylinder with the following results:
   a. Loss of pitch on card clothing (haired up or rough).
   b. Bad jams in card clothing which eventually result in wire breaking out.
   c. Difficulty in stripping.
   d. Rolling and pilling of stock, which is conducive to higher costs, lower production and a decrease in quality.

Conclusion

Since the breast is such an essential part of the modern woolen card and is so important in preparing the stock before it is transferred to the breaker cylinder, it is definitely to the mill's advantage to see that it is maintained in proper condition.

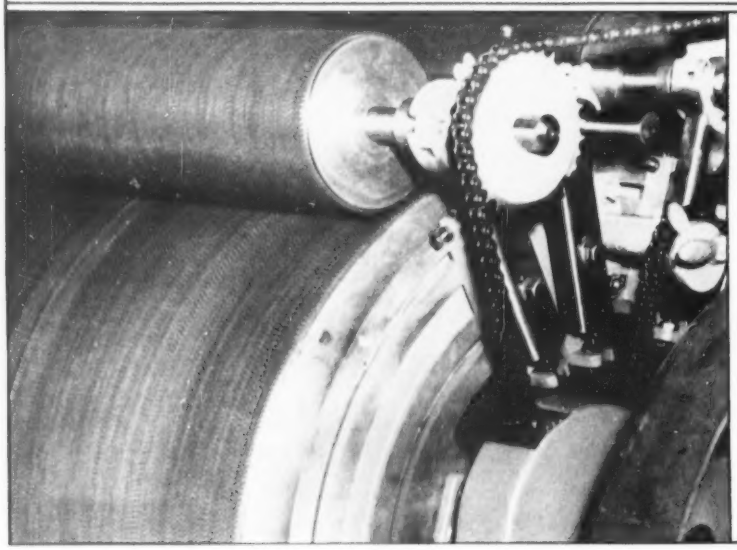
NOTE: Reprints of these "tips" will be furnished on request to Ashworth Bros., Inc., Fall River, Mass.

Please turn the page ➧

HAVE YOUR METALLIC ROLLS RECOVERED

By *Ashworth*

(Check with our nearest Plant before Shipping)



...AND OBTAIN

1. Better quality carding
2. Increased production
3. Longer card clothing life
4. Thus lower costs

This procedure is desirable when sending metallic rolls to us for recovering:—

1. State on purchase order the following information:
   a. Type and size of roll.
   b. Number of points per linear inch and number of threads per inch desired.
   c. Hardened point (not just blued — but really hard) or regular wire.
2. If metallic roll is sent in without wire, mark direction in which wire should point.
3. When crating, the roll should be completely boxed (including shafts) and supported at each end as close to the heads as possible. Box should be made large enough to clear points of wire after roll is recovered.

WHAT YOU GET FOR YOUR MONEY

1. Shafts straightened and heads checked.
2. Shafts metal sprayed, if necessary.
3. Thickness of shell checked.
4. The best wire, both manufactured and installed, by Ashworth, to the closest tolerances.
5. Fast and reliable service.

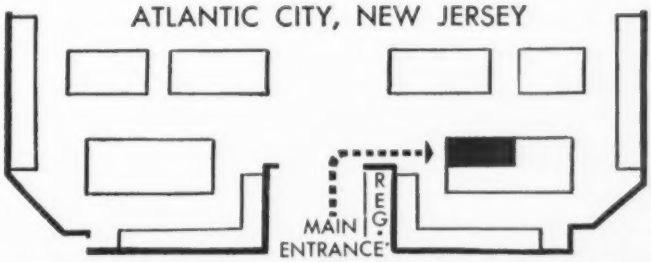
OTHER ASHWORTH SERVICES

Reclothing flats and milling flat ends for cotton cards. Rewinding lickerins. Analysis of carding problems and recommendations.

NO CARD CLOTHING IS ANY BETTER THAN THE SERVICE BEHIND IT

A Cordial Invitation to Visit us at the

AMERICAN TEXTILE MACHINERY EXHIBITION



WE'LL BE HERE · APRIL 26th THRU 30th · BOOTH NO. 579-580-581

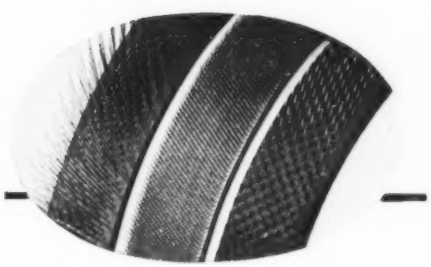
Stop at our booth (579-580-581) while at the show and learn about the fine "points" of Ashworth Card Clothing.

If you have any problems in carding cotton, wool or the newer man made fibres, we will gladly discuss them and also show you the latest types of card clothing (flexible and metallic) now in use.

Drop in and see us, whether for information or relaxation. We'll be glad to see you.

We'll All Be There:

R. C. Ashworth, Jr., President	Fall River, Mass.
W. J. Flynn, Jr., Vice President	Fall River, Mass.
G. R. Ashworth, Treasurer	Fall River, Mass.
G. A. Davis, Manager of Woolen Div.	Worcester, Mass.
H. Ashworth, Sales and Service	Charlotte, N. C.
C. E. Lalime, Sales and Service	Fall River, Mass.
F. L. Armitage, Sales and Service	Philadelphia, Pa.
P. Brann, Sales and Service	Worcester, Mass.
J. M. Reed, Southern Manager	Charlotte, N. C.
A. E. Johnston, Jr., Manager	Greenville, S. C.
J. E. Seacord, Manager	Atlanta, Ga.
A. E. Johnston, Sr., Sales and Service	Greenville, S. C.
T. Hart, Sales and Service	Charlotte, N. C.
R. Clary, Sales and Service	Atlanta, Ga.
W. Halstead, Sales and Service	Greenville, S. C.
E. S. Howell, Manager	Philadelphia, Pa.



ASHWORTH BROS., INC.

AMERICAN CARD CLOTHING CO. (WOOLEN DIVISION)

Fall River*†‡ Worcester‡ Philadelphia*†‡ Atlanta†‡
Greenville*†‡ Charlotte†‡ Dallas†‡ (Textile Supply Co.)

*Factory †Repair Shop ‡Distributing Point

3 Factories • 6 Repair Shops • 7 Distributing Points

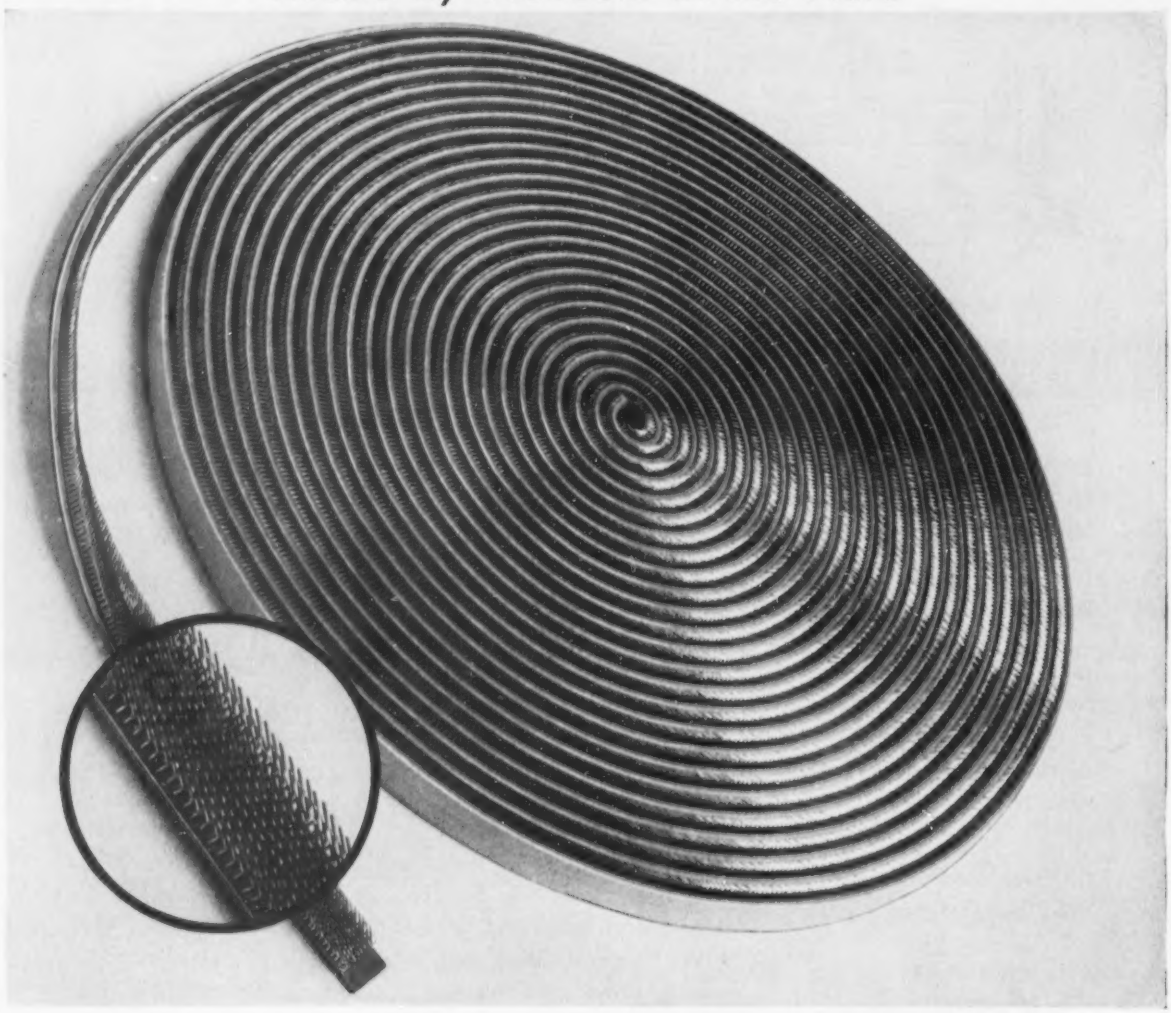
Ashworth CARD CLOTHING

Please turn the page

Ashworth

NAPPER CLOTHING and BRUSHES

Made by Pioneers in the Field



We were among the first to manufacture napper clothing and brushes in the United States and now carry in stock standard types for prompt delivery. We also furnish special constructions to order.

Our long experience in this field and practical napper men on our staff enable us to intelligently analyze your napper problems and to make sound recommendations as to type of clothing needed — for wool, cotton, silk or man-made fibres.

Write to our nearest plant and tell us your problem or state your requirements.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River*†‡ Worcester‡ Philadelphia*†‡ Atlanta†‡
Greenville*†‡ Charlotte†‡ Dallas†‡ (Textile Supply Co.)

*Factory †Repair Shop ‡Distributing Point

3 Factories — 6 Repair Shops — 7 Distributing Points

PRODUCTS AND SERVICES

Clothing for Cotton, Wool, Worsted, Silk, Synthetic Fibre and Asbestos Cards and for all Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors of Platt's Metallic Wire. Lickerins and Top Flats Reclothed.

HOW OTHER MEN MANAGE

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •

Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Identification of Weavers' Work Brings Improvement

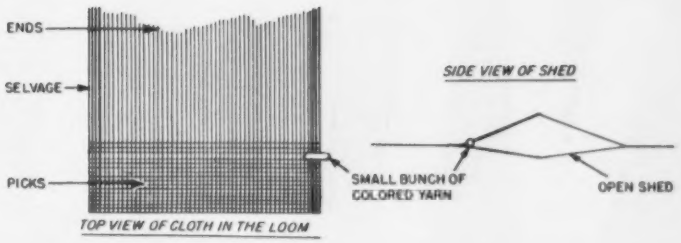
EDITOR TEXTILE INDUSTRIES:

While working in the weave room of a voile manufacturing company, I observed an interesting method of controlling the quality of the fabric and boosting the morale and interest of the weaver, at the same time increasing the weaver's earnings. The company made high-priced and first quality fabrics. It was necessary to identify each weaver who made a defective piece of cloth so the defect could be traced to the source of the trouble.

The mill superintendent had the following idea: Each weaver, at the end of a piece of cloth or at the end of his shift, should place a small bunch of colored yarn in the open shed and near the end of the selvage and run the loom a few picks more to hold the bunch in place (see sketch). A different color was used for each shift. The bunch was easily removed by pulling after the cloth was inspected, and the cloth was not damaged in the least by the bunch.

Each piece of cloth was identified by a tag giving the specifications of the cloth and the loom on which it was woven so the weaver could be readily identified. This procedure not only served to increase the quality of the cloth and to punish the inattentive weaver, but also boosted the morale of the weavers who knew their good work was appreciated and rewarded by an extra "good-quality" bonus at the end of the week. The procedure was simple and inexpensive, and the results were so surprising, I believe other mills with similar problems may wish to try a similar plan.

CONTRIBUTOR No. 8551



Experienced Reader Says Record Test Conditions!

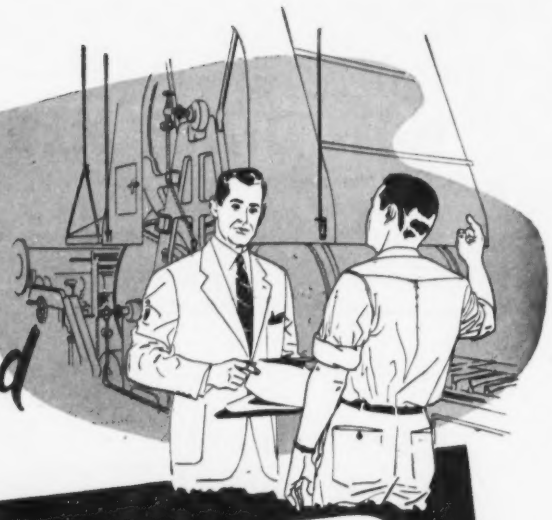
EDITOR TEXTILE INDUSTRIES:

Recently when looking over some old records in our laboratory files we were uncertain as to some of the conditions under which the tests were made. We determined to remedy this situation so that future test reports would carry full data as to test conditions, testing machine capacity, etc.

It seemed to us to be a waste of time to have to write this information on all of our reports, and because of the varied types of forms that we have to use, including some made on plain paper, it was not practical to have the data printed. We therefore had some rubber stamps made to show the necessary information, and it is a matter of only a few seconds to stamp the data right on the report form or sheet.

Everyone in the laboratory and the officials who receive the reports are enthusiastic about this system. We feel that our reports are much more reliable than they formerly were, and when reports are referred to in the future there

KEESTAR PRODUCTS



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will be no questions about how the tests were made.

Some of the stamps we use are illustrated below:

A. S. T. M. GRAB TEST—CONDITIONED

0 - 1000 LB. DIAL

LOWER CLAMPS OF TESTING MACHINE PADDED WITH RUBBERIZED DUCK

CONTRIBUTOR No. 8640

Steamed Glass Filling Runs Better

EDITOR TEXTILE INDUSTRIES:

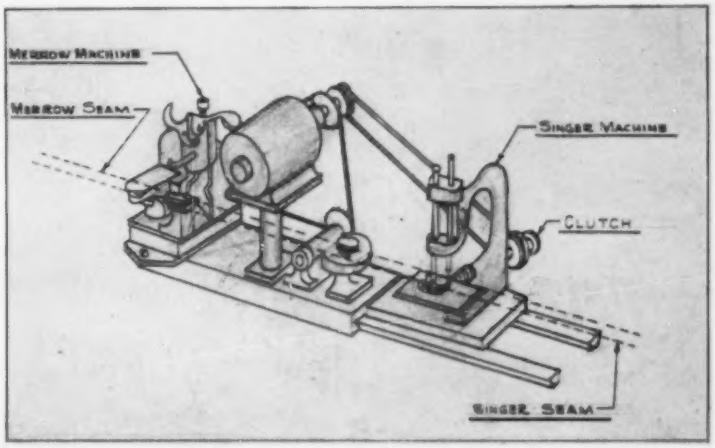
We were running 225/1/0 Fiberglas filling and having a great deal of trouble with filling sloughing off after quill was three-fourths empty. This filling was being used on XD Drapers running at 160 ppm. We slowed looms to 150 ppm. This reduced the trouble but did not eliminate it.

A few years ago we ran a crepe filling which had to be steamed before using. We remembered the crepe and thought of steaming the glass filling. We were surprised and gratified at the improvement after the filling was steamed. The filling was not as wild as formerly, it ran completely off the bobbin with less breakage, and the sloughing-off cleared up. Upon steaming the filling, we were able to put looms back to 160 ppm, and there has been no recurrence of the trouble.

The filling was placed in a steam box for a period of ten minutes with steam turned on full. Since the first experiment, we have found that all glass filling runs better, whether single or plied, after it is steamed. Before the steaming experiment, we tried all kinds and shapes of quills and different tensions in quilling, all to no avail.

CONTRIBUTOR No. 8614

Tandem Sewing Machines Make Double Seams for Dyeing



EDITOR TEXTILE INDUSTRIES:

Some styles of cloth require two seams before they can be run through the dye jigs. We formerly used two separate sewing machines for this double operation. Now we've rigged up the two machines in tandem and have to run the cloth through only once to get our double seam.

We had a Singer and a Merrow machine that weren't flush with each other when they were placed side by side. This problem had to be licked before anything else could be done.

First we took a 4-in. base, put it on a lathe, and turned it down so that it would run on the same track with the Merrow base. Then

KINK CONTEST!

$100 will be awarded the winner.

Send your entry now! This contest ends March 15, 1954.

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, March 15, 1954.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously.

Send your contest entry to:

Editor TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Georgia.

If disaster strikes, everybody will want help at once

Imagine they just dropped an atom bomb.
(And maybe they will tomorrow. Who knows?)
You pick yourself up. You're unhurt.
Must have gone off some distance away.
Lucky that flying glass didn't get you.
Several fires out there in the plant.
Lots of casualties, too. Better get going.
Reach for the phone. It's dead. Well, you might have known.
Ambulances, fire engines, doctors, that's what you need.
And quick.
You've never needed help like you need it now.
But the same goes for everyone else in town.
Thank God Jones made all those people go to the first-aid classes.
Looks like they'll be the only help you'll get for hours.
Thank God they've got plenty of dressings, splints and stuff.
Remember when you got sore at Jones?
("All this stupid first-aid malarkey," you called it.)
Know better now, don't you?
Place looks like a tornado hit it.
Maybe that's what it was?
Whatever it was, better get busy.
There's plenty to do. Thank God you were ready.

Whatever the emergency is—you can be ready for it. That's just good business. Take these precautions TODAY.

- ☐ **Enlist the help** of your local Civil Defense Director.
- ☐ **Check contents** and locations of first-aid kits.
- ☐ **Send staff** to Red Cross courses. They may save your life.
- ☐ **Promote preparedness** in your community. Your local CD Director can show you how.

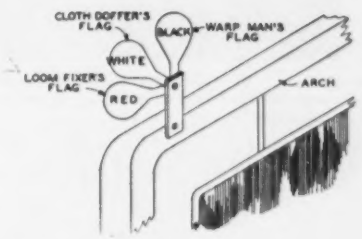
Check off these four simple points NOW—it's a matter of life or death.

we bolted the new Singer base to the Merrow base and put the Singer machine on its base. We offset the Singer machine so that the second seam would be 1½" away from the first. Total track length is 92".

We decided to run the two machines with one motor. To accomplish this, a second pulley was put on the motor shaft, and a belt was connected to the Singer head from a second pulley. Each machine has a clutch so that we can stop it separately if we want only one seam.

To put the machines in operation, the cloth is placed in the Singer head. Then the machines move down the track mechanically until the Merrow machine reaches the cloth. The Singer machine is taken out of operation by the seamer hitting the clutch. Now the Merrow machine is fed. With both machines fed and ready to go, both clutches are thrown and the two seams are sewn simultaneously. As each machine moves off the cloth, the operator hits the clutch to stop it. CONTRIBUTOR No. 8648

Install This Loom Flag--Save Steps



EDITOR TEXTILE INDUSTRIES:

Usually the first thing that catches your eye in a weave room is a loom flag made of bobbins or some old dirty stick. Very often weavers and loom fixers lose flags that are just hung on the loom arch.

To remedy this situation we have designed a flag that is attached permanently to the loom. There are three flags in the group, and they are painted three different colors indicating (1) a warp off, (2) the cloth needs doffing, (3) the loom needs fixing. Now all the weaver has to do is raise the flag corresponding to the loom needs. This eliminates looking for a stick or bobbins to make a flag.

Since the colors (usually red, white, and black) are outstanding, they may be easily seen and can be distinguished as to the loom needs, thereby saving unnecessary checks on the loom.

For example, suppose a loom is flagged for a warp off; since the flag can be seen over the entire room, a quick glance will tell the loom fixer or cloth doffer that it's not his job, so only the warp man need be concerned. Another feature is that by standing in one spot the overseer can count at any time the number of looms standing and the cause. The accompanying sketch illustrates our loom flags.

CONTRIBUTOR No. 8617

Make This Gauge to Adjust Feed Racks on Quillers

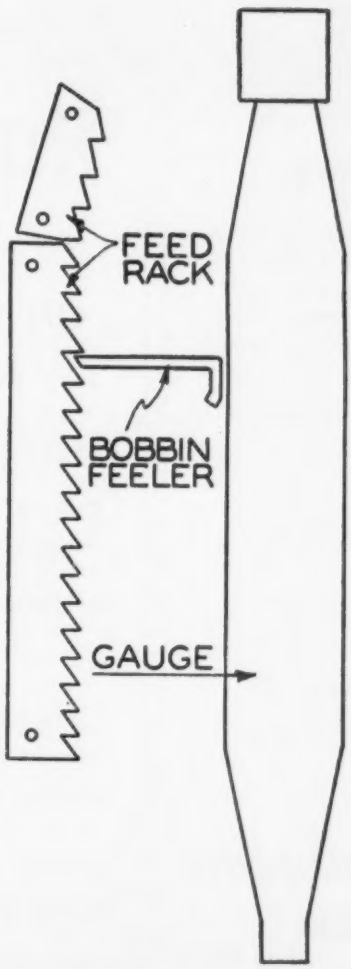
EDITOR TEXTILE INDUSTRIES:

Other mills may be interested in the method we use on our Abbott automatic quillers to secure uniform packages from spindle to spindle. The old method of using a slip ring to gauge the package and adjust the feed racks was found both difficult and time-consuming, so we developed a model of a full quill package to use to adjust the feed racks.

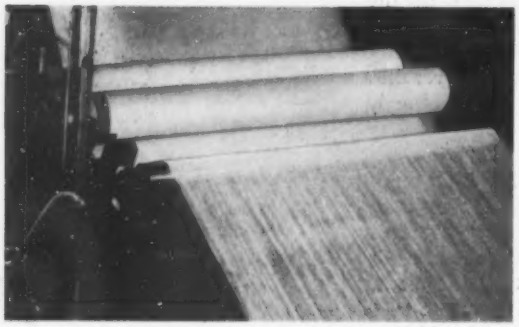
This gauge can be made of wood or a light metal and should be turned in a lathe. We have found that the gauge should have a diameter of ⅛" less than the desired diameter of the full package, since the thread guide winds back of the bobbin feeler and makes a package slightly larger than the clearance of the feed racks to the package. The overall length of the gauge should be the same as that of the quill being used.

Our fixers are able to quickly check for uniform packages and make the necessary adjustments to individual spindles by using this gauge. Also, this has decreased our loom stops and yarn waste attributed to quality of the filling packages. A reduction in the number of packages deviating from the standard size has been effected.

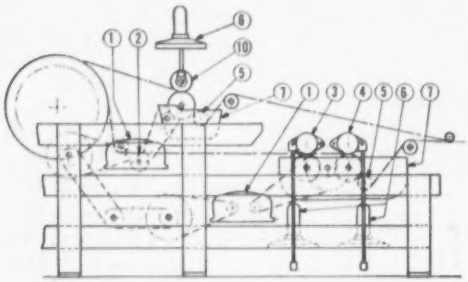
CONTRIBUTOR No. 8645



DOUBLE QUETSCH



A double set of rolls assures maximum "squeeze" and thorough size impregnation of heavy cotton and spun rayon warps at Waverly Mills.



Makes Possible Sizing of Combination Warps

Mills that produce a variety of fabrics, warps of which contain two or more kinds of natural or synthetic yarns, are finding that results are better and costs are lower when they have Johnson Warp Sizers equipped with one or more auxiliary quetsch units.

Why not have this advantage in meeting competition? Write us today for details.

KEY TO DIAGRAM

1. Positive variable speed unit to regulate stretch between quetsch and cylinders.
2. Cut marker.
3. Four roll double quetsch.
4. Four roll double quetsch.
5. Adjustable immersion roll.
6. Air motors for pneumatic loading of quetsch pressures.
7. Large stainless steel direct loading of solution pan.
10. Two roll single quetsch.

Charles B. Johnson

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Discussion On Opening and Re-rolling Double Cloth

EDITOR TEXTILE INDUSTRIES:

After weaving double cloth, it is necessary to open the cloth full width for inspection and re-rolling. We have been unrolling the cloth across a table and onto another full-width roll, inspecting the cloth as it is pulled across the table. We should appreciate any suggestions from your readers regarding improvements we can make in this operation.

CONTRIBUTOR No. 8632

EDITOR TEXTILE INDUSTRIES:

In reply to CONTRIBUTOR No. 8632 regarding unfolding and re-rolling double cloth, we use an old inspecting machine widened to the desired width. The cloth is doubled and put in a scray, and an upright roller is attached to the back of perch and at the left edge. A piece of thin metal in the shape of an inverted Vee is attached to the back of the perch. The inverted Vee separates the cloth at the fold, and the cloth is then brought down over the perch and wound on a tube or roll in the regular way.

Another similar arrangement is shown in the accompanying sketches.

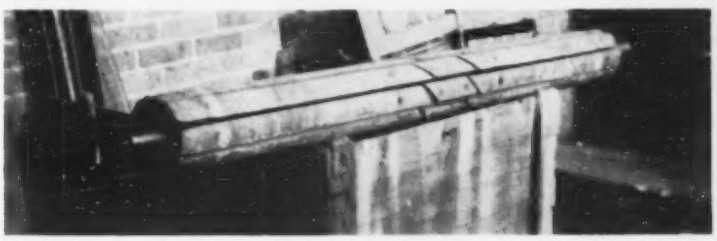
If the cloth is dress goods or fancy goods we use a spreader roll which is composed of a series of cleats which move on a cam somewhat like the cam on a coner (see accompanying photo).

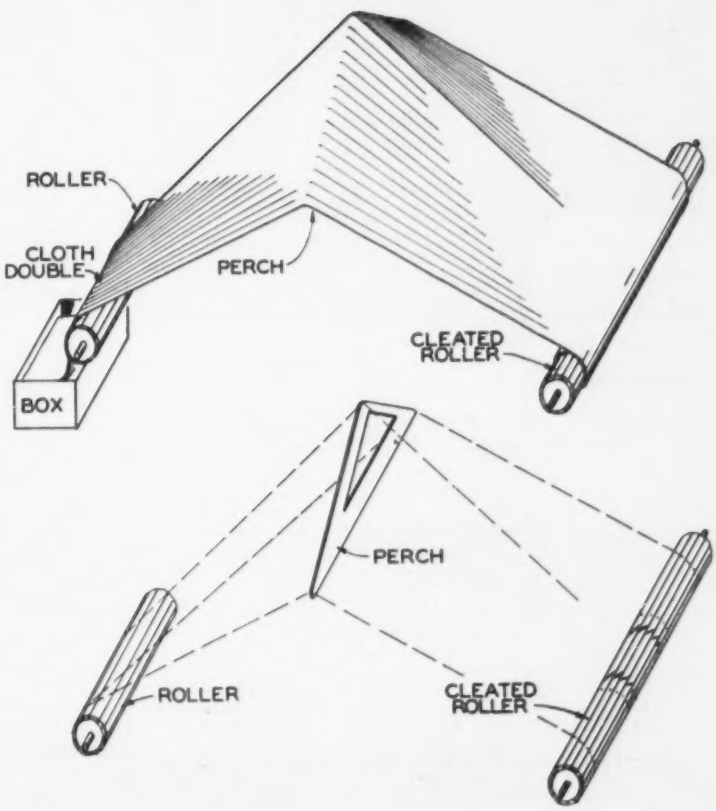
About 12 inches in the center of the roll is solid and slightly larger than the two end sections. As the roll turns, the cleats move in and out from center to edges which helps to remove wrinkles at part of the cloth which is folded. The cloth is then rewound on tubes for finishing.

Another method involves the use of a regular roll and two temples on brackets which are attached to the edges to help pull the cloth out to width and keep it straight. Temples must be set just tight enough to hold cloth and roll.

Our cloth is not quite as wide as the cloth made by CONTRIBUTOR No. 8632. Ours is a crepe material and measures 80" unfolded. We also make some fancy bed spread material which is handled in this way.

I hope this information may be of some value. I would be interested to know about some of the metnods used by CONTRIBUTOR No. 8632. Efficiency might be improved by slight modifications or





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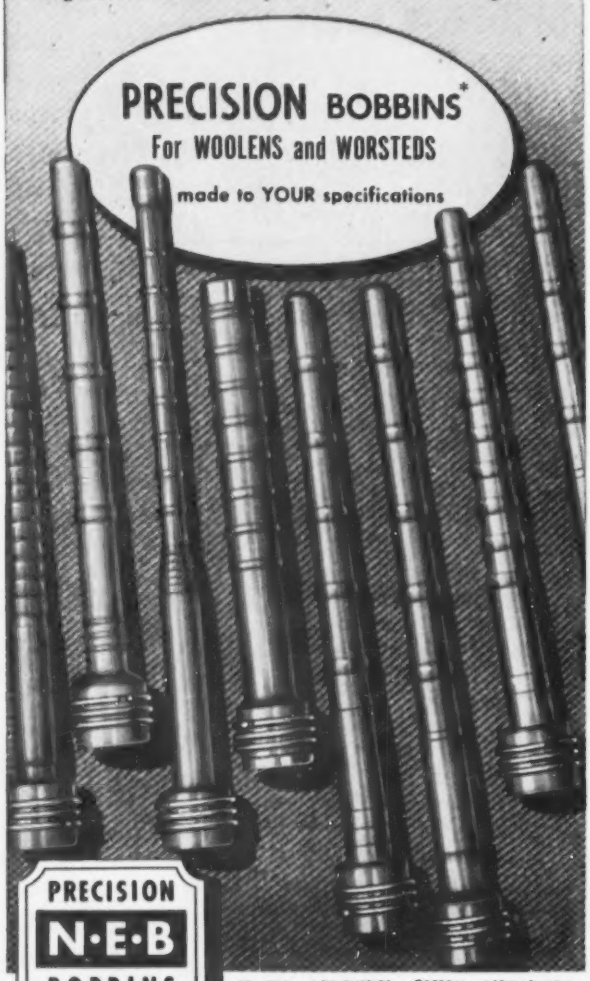

*For SILK and SYNTHETICS — COTTON and SPUN RAYON — WOOLENS and WORSTEDS

Precisioned to Size — Precisioned for Concentricity
Precisioned for YOUR Spindles . . .

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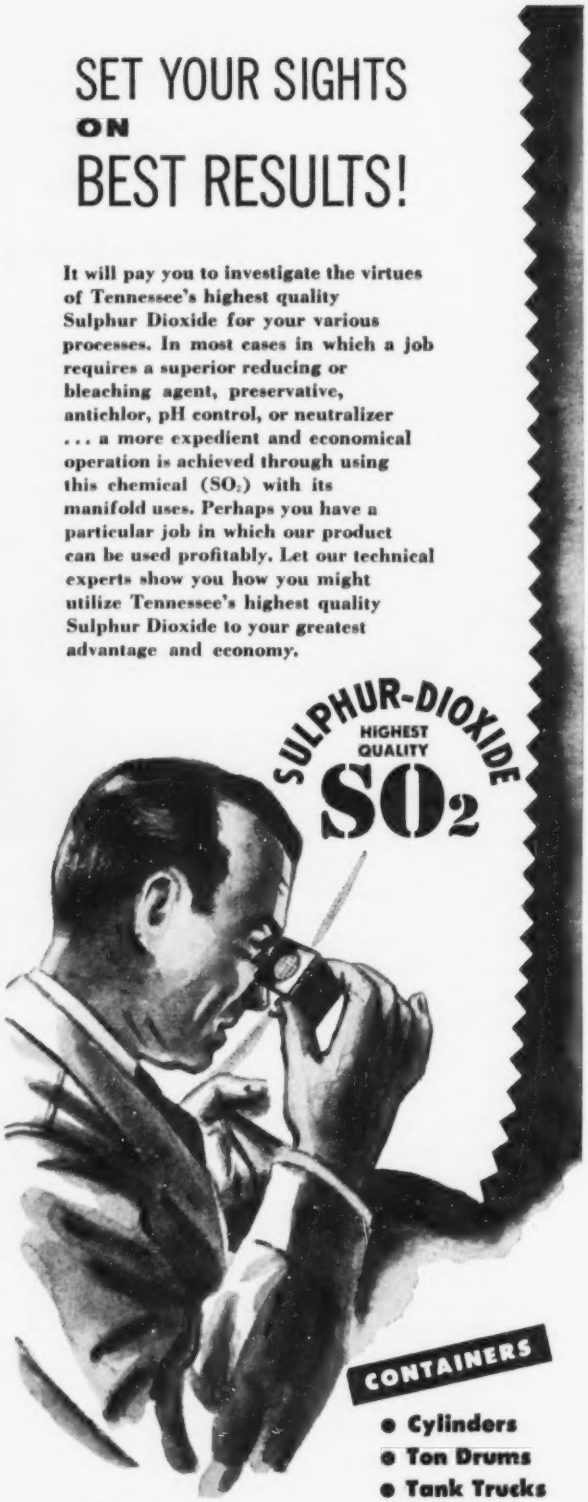


For detailed information, phone, wire or write—

TENNESSEE CORPORATION

617-29 Grant Building, Atlanta, Georgia

combinations of the best features of different methods.

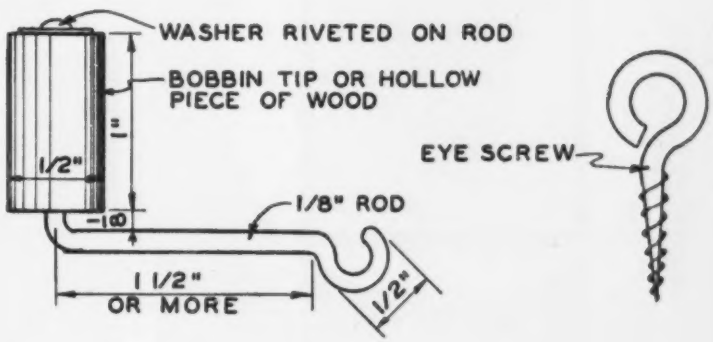
CONTRIBUTOR No. 8636

Screw Crank Speeds Harness Work

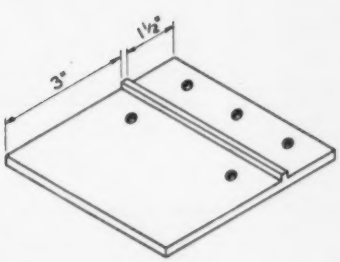
EDITOR TEXTILE INDUSTRIES:

The device shown in the accompanying illustration may save time on many jobs in the mill shop, especially on harness repairs. The hook on the end of the crank should be inserted into the eye-screw, and by turning the crank the screw is installed quickly and securely. This crank speeds screw installations and saves the fingers.

CONTRIBUTOR No. 8637



Temple Slide for Running Wide Cloth

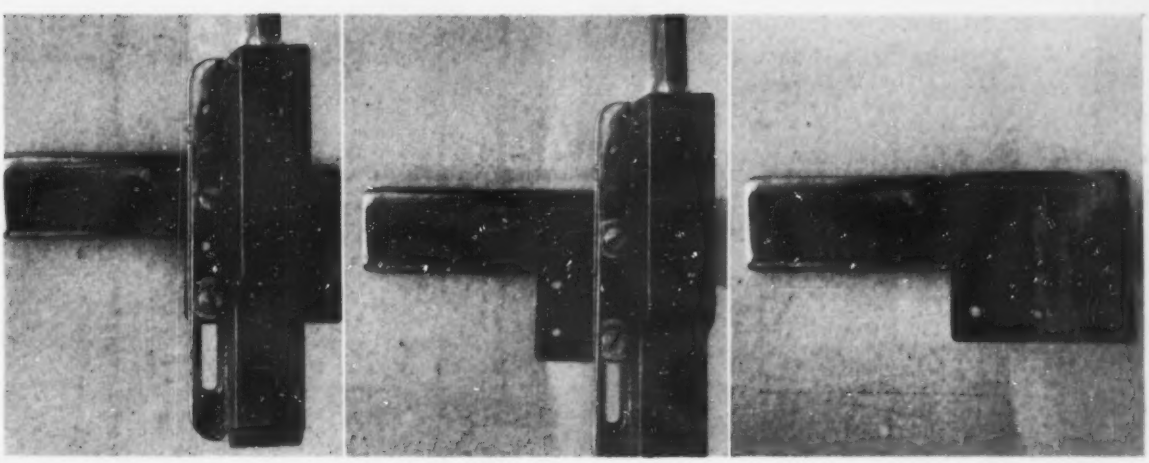


EDITOR TEXTILE INDUSTRIES:

I used a kink to good advantage on a temple stand when running cloth that was wider in the reed than the temples normally could take. On our XD Draper looms the press roll is 53" wide. We had to make a fabric which would come from the loom 52¾" wide.

Upon moving temples to extreme positions on either side, we still did not have enough room to hold the cloth, even when corner of temple stand was ground off. We added a 3" piece to the temple slide as shown in the accompanying illustrations.

The ridge which fits in groove on bottom of temple under ordinary circumstances acts as a brace



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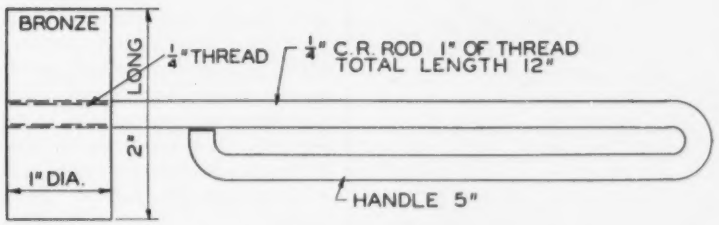
when temple is moved to new 3" section. This added piece is not in the way when not in use. Several looms can be fitted this way so that when wide goods must be made, no time is lost. The change is effective and doesn't impair the appearance of the temple stand.

CONTRIBUTOR No. 8600

Hammer Removes Travelers Without Damaging Rings



EDITOR TEXTILE INDUSTRIES:

Upon changing spinning ring travelers, the person doing the job sometimes uses a regular hammer to break off the old travelers. When this method is used there will be some damaged rings. Other operatives sometimes use a fly frame bobbin, and that always ruins the costly bobbin which must be replaced.

A quick and satisfactory way to prevent these difficulties is to make a simple hammer with a bronze head which is too soft to hurt the spinning ring. The material for this tool can be found around any mill shop, and making the instrument requires only a few minutes.

I have found that for the average mill a piece of bronze 1" in diameter and 2" long is the best size. Just bore a hole through the side of the stock and thread it for a ¼" screw. Then take a ¼" cold rolled rod 12" long and thread 1" on one end so it will screw into the bronze head. The tool will be easier to handle if about 5" of the handle is bent double to provide a bigger grip.

This tool provides a good hammer to break off the travelers, thereby saving damaged rings and fly frame bobbins. Details are shown in the accompanying sketch.

CONTRIBUTOR No. 8649

Nubby Yarn Weaving Problems

EDITOR TEXTILE INDUSTRIES:

We were weaving some nubby yarn on an old C & K loom, and after several hundred yards had been woven it was discovered that a pattern effect was showing up in the cloth. The nubs were spun in an irregular manner, so we consider this pattern effect highly unusual, but nevertheless it was there.

The first remedy we tried was to fill up the quills to different depths so as to start the pick at different places on the bobbins, but this failed to bring about a change in the undesired pattern effect. Next we tried running three shuttles so that we would get a three-bobbin blend, but this also helped very little. Last we tried attaching a rope to one end of the reed, around a pulley, under the loom, and fastened to the lower box on the opposite side.

The reason for this is that when the lower shuttle moves upward to the picking position it will automatically jerk the reed over about ¼" to ½" in the lay to create a staggered effect by moving the warp yarn. By making these three adjustments we have eliminated practically all of the pattern effect, although occasionally it will still show up in isolated places. Naturally, we are still trying to think of more ideas, but to date the aforementioned procedure is the best that we have tried.

CONTRIBUTOR No. 8596

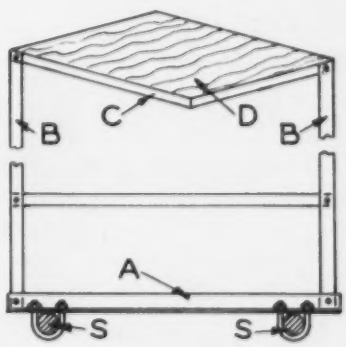
Top Shelf for Winder Boosts Efficiency

EDITOR TEXTILE INDUSTRIES:

We bought a No. 90 filling winder without the top shelf. As we were running very coarse count yarns, the operatives had to turn frequently to take empty bobbins kept in cans. This resulted in low efficiency. A light top shelf to keep empty bobbins was designed in our shop and provided on the winders.

A 1½" angle iron (A in the sketch) is held in position on the supply bobbin shaft (S in sketch) by clamps. Two ring frame creel angle iron pieces (B in sketch) support a bent angle iron (C in sketch). C carries the wood shaft marked D in the sketch. This arrangement has worked satisfactorily for our use.

CONTRIBUTOR No. 8647
(Foreign)



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Executive Views the News

(Continued from page 99)

Maybe we are not so badly off after all!

The Ides of March

As we think about it we are not certain whether the Ides of March should be considered as singular or plural, but we are inclined to think that it is singular, because as we recall in the calendar used by the Romans at about the time of Julius Caesar the Ides fell on the 13th of most months but on the 15th of several other months, among which was March. At any rate what we started out to point out was that the Ides of March, falling on March 15, is connected with the phophesies of Caesar's murder.

In our time March 15 has come to hold just as much terror. Don't forget your Form 1040—the Ides of March are upon us!

DuPont's "Mylar" Polyester Film

(Continued from page 167)

the metallic. If another type dye is used on the same fabric, the surface of the metallic yarn (i.e., the "Mylar") can be dyed without changing the colors of the other fibers.

Citing experience with similar fabrics, dyed in this manner for approximately ½ hour at the boil, he said this showed how the film's thermal stability and the absence of a plasticizer make "Mylar" an ideal component in dyed metallic fabrics.

From the standpoint of physical strength and chemical resistance, Mr. Mitchell said that "Mylar" in metallic yarn form can be satisfactorily dry-cleaned, since the film is unaffected by common dry-cleaning solvents. Such fabrics made with "Mylar," he added, have been dry-cleaned by commercial cleaners as many as five times without degradation of the metallic. The strength and toughness of "Mylar" in metallic yarn form also helps

extend the serviceable life of fabrics subjected to the tumbling, scrubbing, and flexing action required by dry-cleaning.

Fabrics with metallic yarn made from "Mylar" also have been processed satisfactorily in commercial laundry operations because of the film's high tensile strength of 23,500 pounds per square inch, according to Mr. Mitchell. Even subsequent ironing, he said, did not discolor or cause delamination of the metallic yarn, because the high heat resistance of "Mylar" makes possible a wide range of ironing temperatures.

Mr. Mitchell emphasized that transparent supporting yarns of almost any required strength can be made from "Mylar," which is available in a variety of thicknesses. Supporting yarns are used to process metallic yarns—other than those based on "Mylar"—on weaving and knitting equipment, in order to bring tensile strength up to the proper level. Both natural and synthetic fibers are used for this purpose.

Pointing out that none of the current supporting fibers are transparent, Mr. Mitchell said they tend to hide the very thing the consumer wants to see—the brilliant luster and bright metallic sparkle. If "Mylar," with its high tensile strength and crystal transparency is used, he said, the entire metallic surface would then be visible. This would allow fabric designers greater latitude in creating new metallic effects.

He also suggested the film's possibilities as a support for other materials in novelty yarn constructions, in view of its cross - dyeing characteristics, chemical resistance, heat-stability, and strength.

Declaring that "Mylar" also can be used as a surface film for metalizing and fabric laminations, Mr. Mitchell said that when "Mylar" is subjected to high vacuum conditions in contact with aluminum vapors, the vapors condense on the film in a very thin layer.

Known as vacuum metalizing, he said this process results in a bright, mirror-like effect. When the aluminum-coated, or metalized film is laminated to a fabric backing, and then embossed, it creates a handsome, decorative material. Mr. Mitchell said this material might be used for upholstery applications, decorative paneling, shoes, pocketbooks, window shades, etc. If color is desired, he said "Mylar" polyester film can be printed with color before metalization, or the film can be dyed after this process.

"Mylar" in its colorless, transparent form also can be laminated to brightly colored fabrics for place mats, umbrella coverings, rain hats, raincoats, etc. Laminated to other type fabrics, he said it might find use in the industrial field where chemical resistance, resistance of oils and greases, strength, and thermal stability are required.

Another important textile application for "Mylar," he pointed out, is a leader material in dying and finishing operations. Since "Mylar" polyester film will not accept direct dyes, it is unnecessary to strip it after every dye run. This eliminates the danger of color contamination at fabric ends, when different color residual dyes sometimes migrate from the leader into the fabric.

Summarizing other textile applications for "Mylar," Mr. Mitchell declared the film can be used as follows: in narrow width, heavy gauge form as a monofilament material for special upholstery, ornamental, and industrial applications; in perforated tape and card form for machine control purposes; in pressure-sensitive tapes for use around textile plants; and as garment bags and dust covers.

In conclusion, Mr. Mitchell pointed out that most of these applications are performed by film converters, which laminate, print, and metalize "Mylar;" or slit the film into widths less than ½ inch. He emphasized that Du Pont manufactures "Mylar" only in its transparent, colorless form, in rolls and sheets. Rolls are available in widths from ½-inch to 40 inches.

Although "Mylar" is still being produced in limited semi-works quantities at the Film Department's laboratory in Buffalo, he said that a new plant to manufacture "Mylar" will begin operations in Circleville, Ohio, later this year.

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SUPPLIERS News

WHAT THEY ARE DOING

Allied Chemical & Dye Corp.'s Semet-Solvay Petrochemical division has opened a new Niagara River Petrochemical plant at Tonawanda, New York, for production of polyethylene products. Producers of textiles are said to find the A-C polyethylene of interest because of its non-tackiness, chemical resistance properties, abrasive resistant qualities, and non-toxicity. From the National Aniline division comes news that Fred W. Noechel is now head of the textile fibers application laboratory. He is responsible for textile processing techniques relating to the use of Allied Chemical's nylon-type fiber soon to be produced. Donald M. Goerg has joined the division in New York as a technical sales representative. He was recently with Klopman Mills, Inc.

John W. Bullard, formerly with Tompkins Brothers, Syracuse, N. Y., has announced the formation of **The Precision Knitting Machine Co.**, division of Central City Machine & Tool Co., 503 West Belden Ave., Syracuse, N. Y., "to further the development

Mr. Bullard

and production of spring needle knitting machinery." It is expected that a 20-feed spring needle knitting machine as well as a kit to convert existing machines for higher production will be placed on the market "sometime in the middle of the year."

Robert L. Gerson has been made advertising manager of the **Atlanta Paper Co.** He was previously with broadcasting stations WSB and WSB-TV in Atlanta.

R. E. O'Neill has been made general manager of sales for **Atlantic Steel Co.**, Atlanta, Ga. R. H. Prater was named traffic manager for the company. Paul A. Duke has joined the fabricating division as sales engineer, and will handle sales of fabricated reinforcing bars, welded wire mesh, and accessories to the construction field.

Atlas Powder Co. has elected D. J. C. Copps a vice-president. He will be in charge of the firm's explosives, industrial finishes, and engineering departments. Mr. Copps is succeeded as general manager by W. Clayton Lytle.

The **Charlotte Fibre Co.**, 661 Spring St., N. W., Atlanta, Ga., has been named sole sales agent in the United States for "Merinova," the animal protein staple fiber produced by the Snia Viscosa Co. in Italy. Charlotte Fibre, a recently organized wholly owned subsidiary of New England Waste Co. of Atlanta and specializing entirely in new fibers, maintains a New York City branch office located at 350 Broadway, New York 13, N. Y. Carl F. Bodansky, with Snia Viscosa for the past five years in its New York offices, has joined Charlotte

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Fibre and is in charge of Merinova sales as well as manager of its New York branch.

The Baker-Raulang Co. has elected William A. Bauer president and appointed Charles N. Sumwalt, Jr., executive vice-president. Mr. Bauer continues as chairman of the board.

The Boston district office of **Bailey Meter Co.,** Cleveland, O., has moved to new quarters at 230 Congress St. Manager is P. T. Reuter.

John A. Matousek, formerly vice-president of manufacturing, has been named vice-president and general manager of **The Baker-Raulang Co.** Ernest R. Scovile, formerly secretary, is now secretary and treasurer. Russell A. Moore has been appointed field applications engineer.

Beckman Instruments, Inc., has opened a branch assembly plant and European sales headquarters in Munich, Germany. The factory will be staffed chiefly by Europeans, with some key personnel transferring from the plants in the U. S.

W. J. Ulrich, senior sales representative in the Detroit area, has been elected vice-president of **The Carborundum Co.** F. W. Bonacker was made assistant vice-president in charge of sales for the firm's bonded products and grain division. Other appointments to this division were: W. J. Kingsley, sales manager for industrial product lines; and J. G. Fritzinger, sales manager for special accounts. Carborundum has acquired the capital stock of American Tripoli Corp., Seneca, Mo., which owns deposits of and a plant for the production of a form of silica found near there.

Carroll Campbell, formerly with W. D. Dodenhoff Co. and before that

Mr. Campbell

with Woodside Mills, has joined **Texize Chemicals, Inc.,** as industrial field representative.

Vice-Presidents Reinald Kaufman and Walter M. Kelly were recently elected to **Commercial Factors Corp.'s** board of directors.

Alvin Teat has been made sales manager for **Carolina Machinery Co.,** Charlotte, N. C. New representative in Georgia and Alabama is Jack C. Pirkle, Box 85, Hapeville, Ga.

California Container Corp., a wholly owned subsidiary of **Container Corp. of America,** has appointed Fred A. McFarland general manager of the folding carton operations in the San Francisco Bay area.

Eugene H. Thomas has been made sales manager of the Los Angeles shipping container division; and Walter L. Sweeney is assistant general manager of these operations.

Stauffer Chemical Co. has announced the appointment of Theodore A. Haschke as director of sales of the newly-organized industrial chemical division.

H. Rowell Conklin has succeeded Walter Clarke, deceased, as manager

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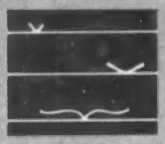

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Send yarn samples to

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SUPPLIERS News
WHAT THEY ARE DOING

of the Milwaukee office of **Continental-Diamond Fibre Co.** He has been with the firm since 1935.

Sam M. Butler, head of the Sam M. Butler Yarn Co., Cherryville, N. C., has been appointed southern sales representative for **China Grove (N. C.) Cotton Mills Co.**

Corn Products Sales Co. has announced the election of two new vice-presidents: W. A. Moore, who has been package sales manager since 1947; and A. N. McFarlane, executive assistant to W. H. Gamble.

T. G. Ethridge has joined the sales staff of **Courtaulds, Inc.,** and will

Mr. Ethridge

represent the firm in the South. He was formerly with Celanese Corp. of America.

John S. Cort, Jr., succeeds Charles E. Grant, resigned, as sales manager of **Diamond Alkali Co.'s** chromium chemicals division.

New sales representative for **W. D. Dodenhoff Co.** in South Carolina and part of North Carolina is Lee C. Shook. He will make his headquarters in the firm's Greenville, S. C., office.

The following appointments in the textile division of **Eastman Chemical Products, Inc.,** have been announced: C. F. Earnhardt, Jr., manager of sales development and service; A. A. Owen, manager of export sales, production planning and order department; John M. Heape, assistant manager of sales service.

Emery Industries, Inc., has under construction a $800,000 research center adjacent to the plant in Cincinnati. The structure will contain 30,000 sq ft, and will house 28 individual laboratories in one with several application laboratories in the

(Continued on page 203)

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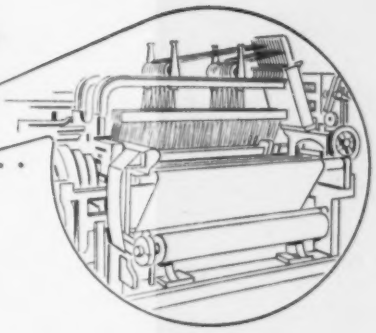

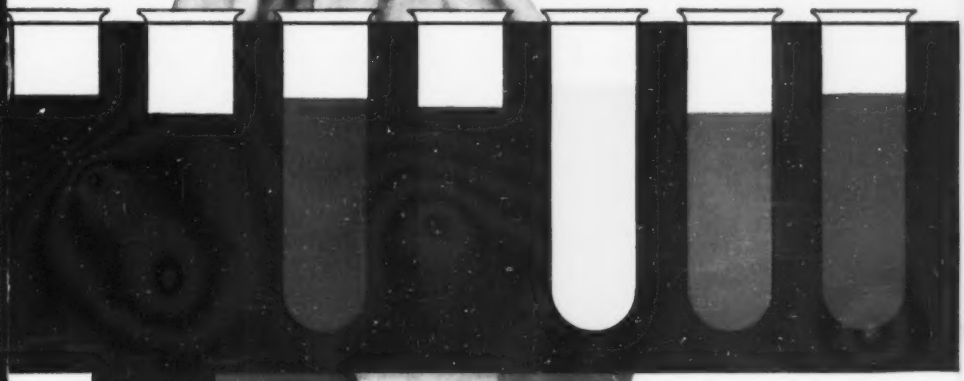

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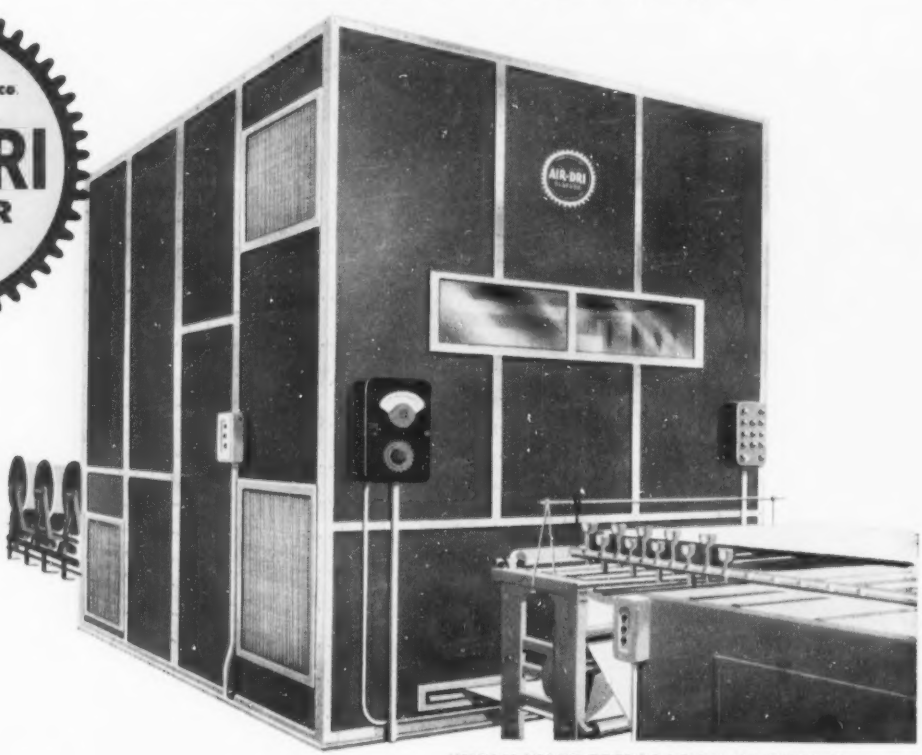

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3-1 First Aid for "Sticky Production Problems." Pamphlet by Industrial Coatings, Inc., shows how Teflon can save costly clean-ups on slashers, dry cans, size kettles, carrier rolls and other equipment where sticking is a problem. Write Industrial Coatings, Inc., 104 South Hudson Street, Greenville, South Carolina.

3-2 Textile Drying, Curing and Singeing Equipment. Booklet shows various Industrial Heat Engineering machines and gives their application to Drying, Curing and Singeing. Complete description in each case. Write Industrial Heat Engineering Company, P. O. Box 3026, Station A, Greenville, South Carolina.

3-3 Vibration Isolation. 16-page booklet, "Why It Pays to Anchor Your Textile Machinery with Unisorb" describes how Unisorb simplifys anchoring of machines on all types of floors, controlling transmitted vibration and noise. Write The Felters Company, 210 South Street, Boston 11, Massachusetts.

3-4 Textile Softeners. Booklet has section on application of Modified Fatty Acids as starting materials for improved textile softening agents. Write Emery Industries, Carew Tower, Cincinnati 2, Ohio.

3-5 Electric Brakes and Clutches for Textiles. New catalog describes line of electric brakes and clutches recently announced by Warner Electric Brake and Clutch. Gives specifications and diagrams. Write Warner Electric Brake and Clutch, Beloit, Wisconsin.

3-6 Power Conveyors for Materials Handling. 64-page catalog describes Zig-Zag Continuous Power Conveyors and Safe-Rail Track. Contains many engineering drawings and other vital figures. Write Richards-Wilcox Mfg. Co., Aurora, Illinois.

3-7 Ball-Bearing Harness Sheaves. Booklet describes compensating sheaves, double flange harness sheaves and single flange harness sheaves with sealed ball-bearings. Write B & B Industries, Inc., 733 Wade Hampton Blvd., Greenville, S. C.

3-8 Latex Thickeners. Brochure by W. H. & F. Jordan, Jr., Mfg. Co., describes the "Alubragums" (sodium polyacrylates) and their applications as specialized latex thickeners for textile mills engaged in back sizing, rubberizing and latex compounding. Write W. H. & F. Jordan, Jr., Mfg. Co., 3126 E. Somerset St., Philadelphia 34, Pa.

3-9 Elevators for Textile Mills. Booklet by Monarch Elevator and Machine Co., describes various Monarch Elevators, both electric and hydraulic, and gives their industrial applications. Write Monarch Elevator and Machine Co., Greensboro, N. C.

3-10 Adjustable Speed Drive. Bulletin gives design features, specifications and particulars of the Franklin Adjustable Speed Drive. Write The Franklin Control Corporation, 1975 S. Allis Street, Milwaukee 7, Wisconsin.

3-11 Fiber Facts. Vest Pocket Booklet by American Viscose Corp. contains a diary for one year's time, plus physical properties of all major man-made fibers in handy form and a glossary of textile terms. Write American Viscose Corp., 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

3-12 Measuring Flow and Liquid Level. 24-page booklet describes a dozen different systems for measuring and controlling liquid level. Brief general sections on measurement, transmission and control. Write Minneapolis-Honeywell Regulator Co., Wayne and Windrim Avenues, Philadelphia 44, Pa.

3-13 Hot Water Storage Heaters. New 48-page catalog offered by The Patterson-Kelley Co., pictures and describes the complete line of P-K hot-water storage heaters and presents useful information on piping arrangements and installation data. Write Patterson-Kelley Co., Inc., 446 Warren Street, East Stroudsburg, Pa.

3-14 High Speed Shuttleless Ribbon Loom. Booklet describes and gives advantages of the SITAM Shuttleless Ribbon Loom. Maximum widths, selvages, picks per minute, dimensions, power required, etc., are discussed. Write Textile Industries, using the handy return card on this page.

3-15 Air Systems for Textiles. Illustrated color booklet describes the Ross Air Systems for textile mills, their advantages and applications in specific instances. Diagrams and operating principles are included. Write J. O. Ross Engineering Corporation, 444 Madison Avenue, New York 22, New York.

3-16 Counting and Measuring Devices. Catalog illustrates and describes Pick and Hank Counters, doffmeters, yardage counters, printing counters, and other Productimeters for all types of textile machines. Write Durant Mfg. Co., 1973 N. Buffum Street, Milwaukee, Wisconsin.

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7. RAYON TELLS ITS STORY TO THE PUBLIC—Folder containing reprints of advertisements explaining some of the many roles in which rayon is serving the American public.—AMERICAN VISCOSE CORPORATION, 350 4th Ave., New York 1, N. Y.

17. A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK—2-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

19. INDUSTRIAL BUILDING—A 32-page booklet entitled "U. S. S. 12, U. S. S. 17 Stainless Steel Walls and Roofs for Industrial Buildings," is now available for distribution. This publication illustrates the use of type 410 and type 430 Stainless steel Sheets in the construction of industrial and semi-industrial buildings.—U. S. STEEL CO., 525 William Penn Pl., Pittsburgh 30, Pa.

22. THE WONALANCET WAY—is the title of a editorial booklet published five times a year and dealing with current problems which appear worthwhile at the time they are written.—WONALANCET COMPANY, 126 Burke St., Nashua, N. H.

PLANT & PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen-page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

106. HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

107. FINNELL SCRUBBERS—Illustrated leaflets describing and giving specifications for the Finnell floor scrubbing machines.—FINNELL SYSTEMS, INC., Elkhart, Ind.

109. MAPLE FLOORING—Booklet describing flashing of Northern Hard Maple Flooring.—List of M.F.M.A.-approved heavy-duty floor finishes.—MAPLE FLOORING MANUFACTURERS ASSOCIATION, Pure Oil Bldg., 35 East Wacker Dr., Chicago 1, Ill.

115. COTTON MILL EQUIPMENT—This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 311 Wood St., Pittsburgh 30, Pa.

117. CLEANING SYSTEMS — Booklet entitled "Certified Climate and Cleaning System" gives latest information on system. Products and uses fully discussed with two-story layout of Certified Climate central station air conditioning system.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

119. MOPPING EQUIPMENT—Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., 121 N. Aberdeen St., Chicago, Ill.

127. SOLENOID VALVES—Bulletin "V" lists sizes from 1/8 inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

129. AIR CONDITIONING AND HUMIDIFICATION—Catalog section 161 lists and briefly describes each item of the complete Bahnson line of equipment for textile mill air conditioning and humidity control.—THE BAHNSON COMPANY, Winston-Salem, N. C.

131. "AIR PROCESSING."—Set of three bulletins showing real meaning of the term, where it can be used, the requirements for a successful system, etc.—J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

133. PAINTING SPECIFICATIONS AND COLOR CHIPS—Industrial Paint and Color Guide, CC446, gives full painting specifications for exterior and interior of industrial plants with complete color samples.—THE SHERWIN-WILLIAMS CO., Painter Maintenance Div., Cleveland, Ohio.

135. COLOR CONDITIONING—Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington 98, Delaware.

138. METAL CONVEYOR BELTS—Recent catalog describes and illustrates Ashworth's entire range of manufacture, including the new Flat Wire Belt design and application, along with their Woven Wire constructions and Positive Drive Chain Edge belts.—ASHWORTH BROS., INC., Metal Products Div., Fall River, Mass.

148. FUNCTIONAL GLASS BLOCK DATA—Folder shows in detail daylighting function of Light-directing and Light-diffusing Functional Glass Blocks.—PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated booklet of industrial brushes featuring textile usage on sheets, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS SONS, INC., 444 Forsyth Ave., Cedar Grove, N. J.

153. LAMINATED TEXTILE PLASTICS — Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry.—SYNTHANE CORPORATION, Textile Division, Oaks, Penna.

154. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—Booklet shows advantages of air conditioned mills in better products and more efficient workers, and gives values of White & Co. air conditioning in particular.—WHITE & CO., INC., 1440 S. Tryon St., P. O. Box 533, Charlotte, N. C.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, 2530 N. Second St., Minneapolis 11, Minn.

167. MAINTENANCE—Silicone water repellent for masonry described in data sheet XR-1290-1. Properties and application of an invisible, durable, non-plugging, silicone masonry water repellent that is inexpensive and easy to apply fully discussed.—DOW-CORNING CORP., Midland, Mich.

168. FLOATING BOTTOM ROVING TRUCK—Booklet by Excel Textile Supply shows advantages of roving truck with automatically adjusted bottom. Eliminates reaching over into truck by keeping load level within easy reach of operator.—EXCEL TEXTILE SUPPLY CO., Lee Ave., Lincolnton, N. C.

181. AUTOMATIC CLEANING EQUIPMENT—Complete booklet by American-Monorail shows working details and advantages of the Tri-Rail Cleaner, a great improvement over the original unit.—AMERICAN MONORAIL CO., 12107 Athens Ave., Cleveland 7, Ohio.

185. CLEAN, DRY, COMPRESSED AIR—8-page color illustrated bulletin thoroughly describes after-cooling, air separating, and air filtering. Also gives size and capacity of K. F. Adams equipment.—K. F. ADAMS COMPANY, INC., 216 E. Park Drive, Buffalo, New York.

187. COLOR CONDITIONING FOR INDUSTRY—Booklet describing how color is used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington, Delaware.

189. MACHINE BRUSHES — Illustrated folder shows many types of machine brushes and describing their particular use for grinding, washing, brushing, singeing, and shearing is sent free upon request.—INDUSTRIAL BRUSH COMPANY, INC., Westside Avenue, Little Falls, New Jersey.

173. BLOWERS AND EXHAUSTERS — Bulletin No. 3014-D describes types "B" and "BE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

174. PAINT STRIPPING BOOKLET—Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and (4) tank immersion.—OAKITE PRODUCTS, INC., 22 Thames St., New York 6, N. Y.

176. STOKERS AND BOILERROOM EQUIPMENT —For information on boilerroom problems, improvements and apparatus, write MCBURNEY STOKER CO., 2119 Peachtree Rd., Atlanta, Georgia.

179. BETTER WAYS—Form 2020, condensed catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Box 97, Toledo, Ohio.

181. AIR FILTRATION — Bulletin 254 describes and illustrates the Auto-Airmat, which is the automatic dry-type air filter. Principle of operation, performance characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

188. PROGRESSING-CAVITY PUMPS — A new principle in pumps. Self-priming, positive displacement, uniform flow features discussed.—ROBBINS & MYERS, INC., Pump Div., Springfield, Ohio.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

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205. TREADED LEATHER BELTING—This 16-page booklet describes Houghton's line of patented, specially treated leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section.—E. F. HOUGHTON & CO., Philadelphia, Pa.

220. LOOM MOTOR BULLETIN—The new design of this ball bearing motor is claimed to represent an advance in the design of loom motors fully discussed.—THE LOUIS ALLIS CO., 427 E. Stewart St., Milwaukee, Wisconsin.

207. TRICO OILER INSTALLATION—Twelve interesting pages of actual "on the job" photos of Trico oiler applications on nationally recognized machinery and equipment.—TRICO FUSE MFG. CO., 2948 N. 5th St., Milwaukee 12, Wisc.

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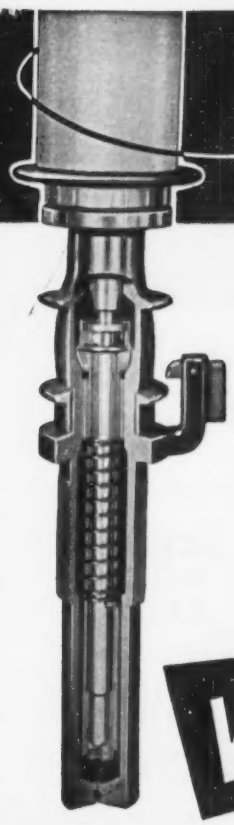

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218. BALL BEARINGS FOR TEXTILE MACHINERY—A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing.—THE FAFNIR BEARING CO., New Britain, Conn.

227. WOOLEN AND WORSTED MILL ELECTRICAL EQUIPMENT—Booklet by Westinghouse follows processes through the mill and shows application and advantages of Westinghouse equipment.—WESTINGHOUSE ELECTRIC CORP., Box 2099, Pittsburgh 30, Pennsylvania.

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230. HEAT RESISTING LUBRICANT—Descriptive pamphlet on Ben Boy High Heat Resisting Lubricant for use in any bearing using excessive amounts of oil or grease or frequent bearing failures.—GEORGIA-CAROLINA OIL CO., 1403 Sixth St., Macon, Ga.

235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pa.

237. SPECIAL TEXTILE MOTORS — Bulletin 51B6055A describes special features of "Quick-Clean" motors, including discussion on free air flow, prelubricated bearings, rigid cast iron frame and double insulation.—ALLIS-CHALMERS MFG. CO., Milwaukee, Wisc.

237. MOTOR CONTROL—Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Users listed and advantages discussed.—CUTLER-HAMMER INC., Milwaukee, Wisc.

238. TEXTILE LEATHERS CATALOG — Catalog by J. E. Rhoads & Sons gives characteristics and advantages of Rhoads "Tannate" leathers. Complete line is listed and described, and tips for correct installation. Copiously illustrated.—J. E. RHOADS & SONS, 35 North Sixth St., Philadelphia, Pa.

239. LICKER-IN AND DOFFER BELTS—Brochure and full information on Licker-in and Doffer belts.—TON-TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

252. HOW TO STOP "LUBRICHAOS" FROM CUTTING PROFITS—Well-illustrated, factual booklet gives advantages and working principles of Alemite's "Coloroute" plan of lubrication control. Has step-by-step method of putting plan into operation.—THE ALEMITE DIVISION, STEWART-WARNER CORPORATION, Chicago 14, Illinois.

253. TEXTILE LUBRICATION—"Lubrication," a magazine published by the Texas Co. is available. Shows methods and means of lubricating chain drives in very comprehensive form.—THE TEXAS CO., 135 East 42nd St., New York 17, N. Y.

258. METERED LUBRICATION—Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc.—BIJUR LUBRICATING CORP., Rochelle Park, N. J.

259. SUNOTEX MACHINE OIL—Booklet describing this machine oil as being "custom-made" for the textile industry. Advantages discussed and pictures of uses which includes knitting machinery.—SUN OIL COMPANY, Philadelphia 3, Pa.

262. SMALL PRECISION METAL PARTS—Catalog by Torrington Company describes many special precision metal parts made by its Specialties Division.—THE TORRINGTON COMPANY, SPECIALTIES DIVISION, 500 Field Street, Torrington, Connecticut.

265. SERVICE PROCEDURE FOR BALL BEARINGS—A helpful manual for maintenance engineers giving helpful hints on disassembly, inspection, cleaning, lubrication, and replacement of ball bearings in any mechanism.—NEW DEPARTURE, DIVISION OF GENERAL MOTORS CORP., Bristol, Conn.

265. SILICONE LUBRICATION — Bulletin 5B2-DC, describes properties of Silicone greases used in motors at high speeds and temperatures, on oven conveyors, tenter frames, can dryers, etc. Decrease by 10 to 1 in re-lubrication requirements described.—DOW-CORNING CORP., Midland, Mich.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices.—THE JOHNSON CORP., Three Rivers, Mich.

302. HYPERSONIC AND ULTRASONIC INSTRUMENTS—Illustrated catalog covering uniformity analyzer, acoustical measuring devices, and other non-destructive industrial measuring instruments. Illustrated brochure describing hypersonic equipment for both laboratory and pilot plant use in the field of ultrasonics.—BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio.

303. PROCESS CONTROL EQUIPMENT—Catalog containing brief description of standard and special process control equipment engineered for textile industry. Includes schematic diagrams.—MASON-NEILAN REGULATOR CO., 1190 Adams St., Boston, Mass.

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311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips.—CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.

314. MOISTURE CONTENT CONTROL—Bulletin F-3156 giving details of features and benefits of moisture equipment control for slashers and textile applications.—BARBER-COLMAN CO., Rockford, Ill.

319. GUIDE TO CORRECT INSTRUMENT SELECTION—This completely revised edition gives a comprehensive bird's-eye view of the companies' entire instrument line. Bulletin 98170.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

321. RED-RAY BURNERS—Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

324. STROBOTAC—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

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339. NEW LUBRICATED PLUG VALVES—Illustrated booklet by The William Powell Co. features a new line of semi-steel and steel lubricated plug valves. Advantages include quick and positive shut off.—THE WILLIAM POWELL COMPANY, 2525 Spring GROVE Ave., Cincinnati 22, Ohio.

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401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

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408. CARD GRINDING INFORMATION—Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—B. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

412. SERVICE FOLDER—Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

414. WORSTED SPINNING — Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

415. DOUBLER-TWISTER FOR LARGE PACKAGES—Bulletin describing two new machines producing straight or tapered top bobbins. Suitable for filament or spun yarns up to three pound capacity. Individual thread stop motion fully discussed.—FLETCHER WORKS, INC., Philadelphia, Pa.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.

418. PACIFIC CONVERTER—Graphic description of machine that cuts any synthetic tow; and when desired, blends it with wool or staple sliver, keeping the fibers parallel, and issuing an even sliver of accurate blend.—WARNER & SWASEY CO., Cleveland, Ohio.

419. TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

420. AUTOMATIC FILLING WINDING — Eight page, two color booklet describing the operation and mechanism of the Hacoba winder.—ATKINSON, HASERICK & CO., 211 Congress St., Boston, Mass.

421. CARD ROLL COVERS—Brochure describing the Davis Seamless Roll Covers. Lists advantages, specifications and offers free trial.—THE TEXTILE LABORATORIES, P. O. Box 1603, Gastonia, N. C.

425. HANDY REFERENCE TABLES — Folder showing spinning traveler speeds, sizes of ring flanges, etc.—VICTOR RING TRAVELER CO., Providence, R. I., and Gastonia, N. C.

426. UNIRAIL UPTWISTER — Bulletin describes Universal Winding's headless package or bobbin take-up Unirail Uptwister which gives you higher yarn quality and better packages at faster speeds and lower costs, according to the bulletin. Well illustrated with advantages discussed.—UNIVERSAL WINDING COMPANY, P. O. Box 1605, Providence 1, R. I.

430. DIXON DATA—Dixon house organ entitled "Dixon Data," which is available in a new form every other month. These house organs contain information on spinning problems as they relate to saddles and component parts.—DIXON LUBRICATING SADDLE CO., Bristol, R. I.

432. PRECISION TEXTILE WINDING—Bulletin on Kidde Tensions and Density Control for winding rubber cores.—WALTER KIDDE & CO., INC., Belleville, N. J.

435. DOUBLE DECK TWISTERS—Bulletin describes Jumbo (8 oz. to 16 oz. headless or take-up spool packages) and Acme (up to 10 oz. packages) models for high speed twisting of silk, rayon, nylon, etc., to finest deniers.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

436. MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER—Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication, and recording.—SCOTT TESTERS, INC., Providence, R. I.

437. SPINDLE TAPE LACING EQUIPMENT—Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes.—CLIPPER BELT LACER CO., Grand Rapids 2, Mich.

438. HEADLESS PACKAGE TWISTER ELIMINATES REDRAWING—Literature shows high-speed Face Drive Twister for accurately building tapered or straight-end headless packages which go direct to quilling or warping without redrawing.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

445. ROLLER BEARING SPINDLES—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

447. CONE WINDER—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

453. EVENNESS TESTER—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

455. PIN DRAFTS—Catalog describing the use and features of the machine, what it can do to cut costs in the processing of natural and synthetic yarns, along with specifications and installation data.—WARNER & SWASEY CO., 5701 Carnegie Ave., Cleveland, Ohio.

458. CONICAL RINGS AND FLYERS — Special data available on the Herr conical rings and flyers.—HERR MANUFACTURING CO., INC., 318 Franklin St., Buffalo 2, N. Y.

459. TENSION CONTROLS — Folder describing tension compensation and automatic tension controls. Three models—Standard, Warp, and Double Disc fully described with specific application.—WALTER KIDDE & CO., INC., Belleville 9, N. J.

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462. TEXTILE MACHINERY PARTS CATALOG—A 24-page illustrated catalog describing the complete line of Dayco and Thorobred textile machinery parts, including Cots, Aprons, Loop Pickers, Lug Straps, etc.—DAYTON RUBBER CO., Dayton, Ohio.

467. CARD CLOTHING—8-page booklet by Benjamin Booth Company describes Strip-O-Matic Card Clothing and its advantages.—BENJAMIN BOOTH COMPANY, Allegheny Avenue & Janney Streets, Philadelphia, Pennsylvania.

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517. LOADING SYSTEM—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

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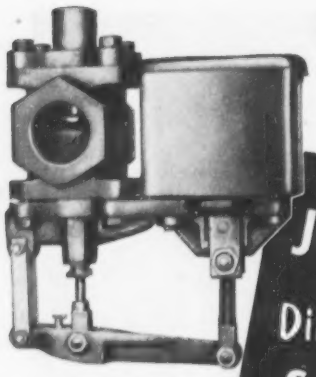

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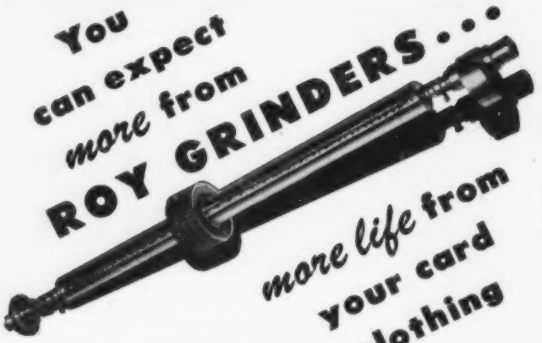

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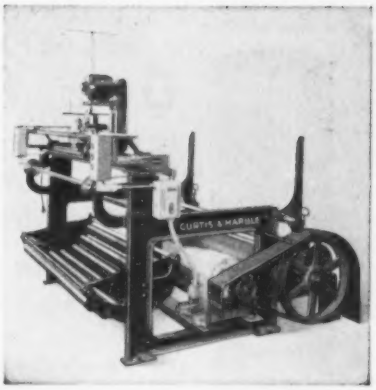

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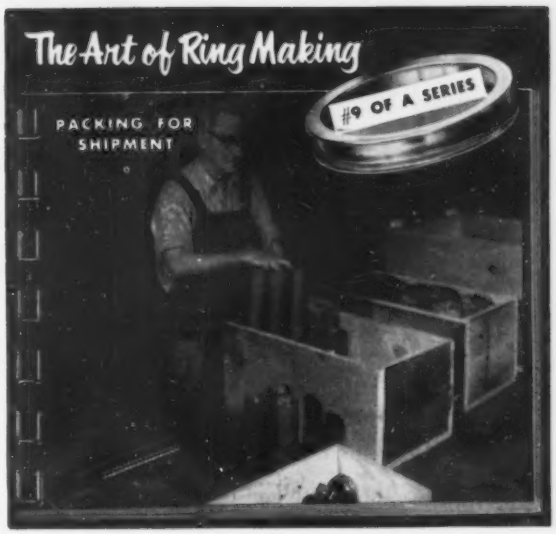

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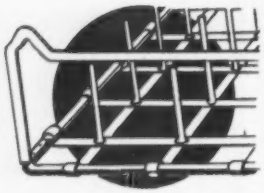

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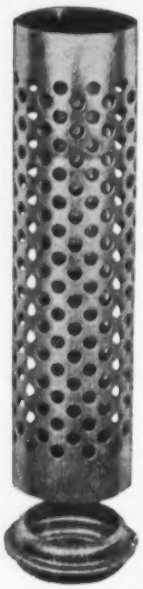

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1025. **ELECTRIC HOISTS AND CRANES.**—Booklets describing a complete line of Electric Overhead, Cab and Floor-Operated Traveling Cranes, and a similar complete line of Electric Hoists. All fully discussed with pictures and engineering diagrams.—SHEPARD NILES CRANE & HOIST CORP., Montour Falls, N. Y.

1030. **CDF RECEPTACLES**—This 32-page catalog, R-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

1032. **ELECTRIC CHAIN HOISTS**—Bulletin 852 describing Robbins & Myers Type "JC" Electric Chain Hoists. Capacities 500, 1000 and 2000 pounds. —ROBBINS & MYERS, INC., Hoist & Crane Div., Springfield, Ohio.

MISCELLANEOUS . . .

1101. **AUTOMATIC BOBBIN REFINISHER** — A descriptivo bulletin illustrating and describing method of refinishing throwing bobbins on a production schedule.—J. M. NASH COMPANY, 2300 N. 39th St., Milwaukee, Wisc.

1102. **BALING PRESSES**—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models.—ECONOMY BALER CO., Ann Arbor, Mich.

1103. **UNBRAKO SCREWS** — Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.—STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1107. **AUTOMATIC QUILL POLISHER**—Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2360 N. 30th Street, Milwaukee 10, Wisc.

1108. **FABRICATION OF U. S. STAINLESS STEELS**—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosive-resistance tables for chemicals.—CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1111. **BRUSHES**—A 26-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1112. **THE RANDOM WEB PROCESS**—Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cutaway diagrams.—CURLATOR CORPORATION, Textile Division, 565 Blossom Rd., Rochester, N. Y.

1113. **MACHINE KNIVES** — Catalog and price sheets describing this company's line of knives for use on textile machinery.—TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

1115. **TEXTILE WRAPPING MACHINES**—Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made.—HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1122. **BALING PRESSES**—Bulletins available describing this company's line of motor-driven and hydraulic baling presses for finished goods, textile fibers, wool, and waste of all kinds.—LOGEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wisconsin.

SUPPLIERS News — WHAT THEY ARE DOING

(Continued from page 192)

basement. The other wing will contain the research executive offices, library, and conference rooms.

The Girdler Corp. has appointed W. Doss Lumpkin to the sales staff of the Votator division. He will be associated with the fats and oils section.

Mr. Lumpkin

E. I. du Pont de Nemours & Co., Inc., has announced the election of Thomas C. Davis as director, a vice-president, and member of the executive committee. Succeeding Mr. Davis as treasurer is R. Russell Pippin.

Raymond C. Firestone and J. E. Trainer, vice-presidents, were recently elected to the newly created positions of executive vice-president of **The Firestone Tire & Rubber Co.**

Fisher Manufacturing Co., Hartwell, Ga., is being represented in North Carolina and Virginia by **Textile Specialty Co.,** Greensboro, N. C., managed by Carroll Atkisson.

Valentine Boise, formerly with Harmon Color Works, is now market manager, industrial dyestuffs, of **General Dyestuff Corp.**

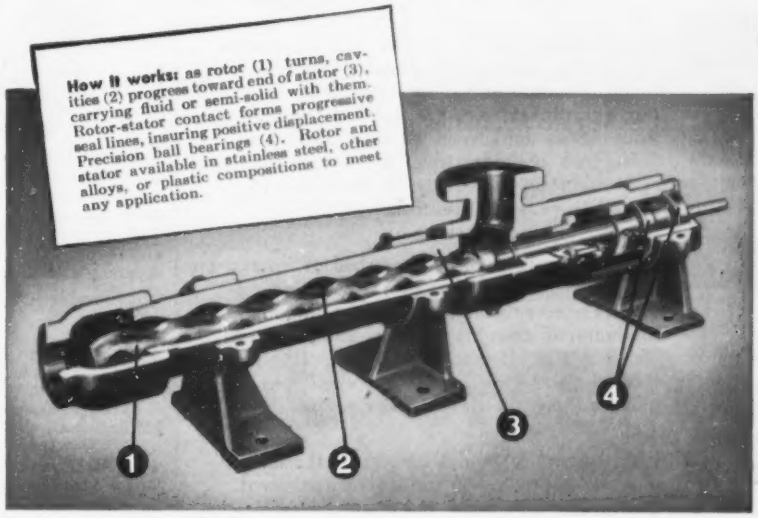
The Goodyear Tire & Rubber Co. has moved into its new district office and warehouse building at 34th St. and Lincoln Blvd., Oklahoma City, Okla. The new building has 52,000 sq ft floor space.

The following promotions on the firm's sales staff have been announced by **Hooker Electrochemical Co.:** Harold A. Wever, field salesman with headquarters in Chicago; Julian J. Boyce, field salesman with headquarters in the Philadelphia area; Ernest F. Blew, headquarters in New York; Charles A. Strack, Niagara Falls. Matthew Mekjean replaces Mr. Strack in the Virgo descaling salt laboratory.

Industrial Heat Engineering Co. is now sales and service representative for the **Rodney Hunt Machine Co.** in the southeastern states. It will handle Hunt's complete line of wet-finishing machinery.

Howard R. Richards has been elected president and general manager of **Industrial Ovens, Inc.:** Sloane E. Allen is vice-president and treasurer; Louis A. Litzler, secretary; E. W. Baumgardner has been appointed sales manager; and A. V. Alexeff, chief engineer.

Lowell Technological Institute has announced that the first scholarship sponsored by **Interchemical Corp.,** Providence, R. I., has been awarded to Chester J. Petkiewicz of Dracut, Mass. It was established for award to a member of the junior class majoring in chemistry on the basis of scholastic achievement, character, and leadership potential. Newly elected vice-president of Interchemical is James Beckett; he is suc-


How it works: as rotor (1) turns, cavities (2) progress toward end of stator (3), carrying fluid or semi-solid with them. Rotor-stator contact forms progressive seal lines, insuring positive displacement. Precision ball bearings (4). Rotor and stator available in stainless steel, other alloys, or plastic compositions to meet any application.
1
2
3
4

If your pump requirements are a little different . . .

The entirely different MOYNO® Pump may be exactly what you need!

FACTS ABOUT THE MOYNO

the world's simplest pump

- **Positive Displacement**—available to pull up to 29 inches of vacuum while discharging under pressure. Big Moynos deliver up to 250 g.p.m. at 600 p.s.i.
- **Gentle**—no foaming; will not break up semi-solids.
- **Reversible**—pumps just as well either way.
- **Trouble-Free**—self priming; won't cavitate or vapor-lock. Just one moving part—no valves to stick, no pistons to gum up. Built for tough service, easy to maintain.
- **Versatile**—handles anything that goes through pipe.

If your materials are viscous, semi-solid, hard to move . . . if they're abrasive or tend to disintegrate . . . find out why Moynos handle jobs where other pumps fail!

The Moyno Pump represents a completely new and different concept of pump design. The cutaway above—and facts at left—show you why it's a pump you can install and *forget.*

And, chances are this versatile pump can solve your problem. Moynos pump clay for a leading pottery maker. They're being used for pumping caustics . . . white water in paper mills . . . even for pumping potato salad!

GET THIS BULLETIN

Get more facts today! Write for Bulletin 30-TI; it will tell you more about the versatile Moyno Pump.

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SPRINGFIELD 99, OHIO • BRANTFORD, ONTARIO

Fractional & Integral Motors & Generators

Electric Fans

Electric & Hand Hoists & Cranes

Moyno Pumps

Propellair Industrial Ventilating Equipment

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MANAGEMENT CONSULTANTS TO THE TEXTILE INDUSTRY FOR OVER 1/3 CENTURY

We are pleased to announce the further expansion of our services to include:

methods time measurement **MTM**
accelerated training **AT**
manhour productivity index **MPI**

MTM is a predetermined time standard procedure. For several years other industries have found its application very effective. Leading textile manufacturers are now realizing the value of its application to their operations. While not replacing the stop watch, its complementary use, especially in methods engineering, is proving invaluable.

AT is a completely engineered method of instruction for jobs requiring skilled operatives. New employees receive the maximum of training in a minimum of time. Programs are tailored to a company's requirements and provide a uniform method for future instruction which can be administered by the trained plant personnel.

MPI is determined by a quick survey and the analysis of a plant's production and labor complement. It indicates, by process and product classification, where excessive manhours are being used per unit of production by comparison with the best attainable standards of operation.

We will be pleased to give additional information about these new services or any of the following:

● New Plant Developments ● New Methods ● Reorganizations ● Plant Appraisals ● Long Range Modernization Programs ● Mechanical and Operating Surveys ● Job Analysis and Evaluation ● Work Loads ● Incentive Plans ● Product Costs ● Cost Control Methods ● Production Planning ● Inventory Controls ● Executive Personnel Service

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Our experience embraces Cotton, Wool and Synthetics, yarn and Fabric Manufacturing, Finishing, Dyeing, Printing and Sewing Plants.

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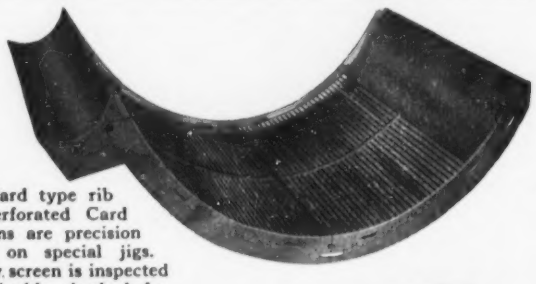
MORE PRODUCTION AT LOWER COSTS

with GASTONIA *TEXTILE*

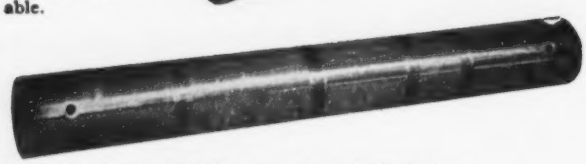
SHEET METAL PARTS

The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.

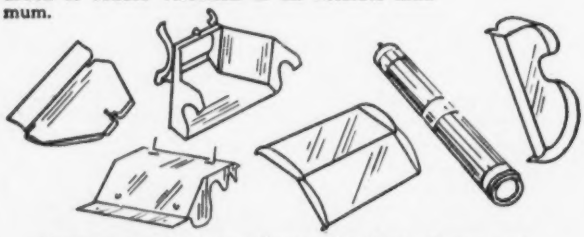


Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.

Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.



New and rebuilt Cylinders are dynamically balanced to reduce vibration to an absolute minimum.



Years of practical experience—the finest of raw materials—and precision machinery in the hands of skilled workmen go into every product.

GASTONIA TEXTILE SHEET METAL WORKS, INC.
GASTONIA, NORTH CAROLINA

A SHEET METAL WORKS SERVING TEXTILE MILLS

ceeded as president of the finishes division by Charles W. Scott.

Harry C. Coley, president and treasurer of **Howard Bros. Mfg. Co.**, has been named Chairman of the Board; he will continue as treasurer. Neal A. Mitchell, general manager and secretary, has been elected prasident, currently continuing as secretary. Other changes are: Arnold W. Englund, recently engaged as general manager; Henry H. McWay, formerly assistant superintendent, is now sup-

Mr. Suggs

erintendent; and Percy F. Rowley, formerly superintendent, is now director of purchases, advertising, and supervisor of personnel. H. Harold Suggs now represents the firm in the southern territory served by the Gastonia, N. C., plant—the carolinas and Virginia.

William A. Richardson is now manager of **Industrial Rayon Corp.'s** southern sales office, with head-

Mr. Richardson

quarters in Greensboro, N. C. He succeeds Joseph H. Mason, who retired after more than 25 years with the firm.

Appointments at **The International Nickel Co., Inc.,** are: J. M. Weldon, general sales department as assistant to the vice-president; C. J. Bianowicz, manager of the Inco Nickel Alloys department; Daniel W. Machon, in charge of the Cobalt section of the nickel sales department.

Robert E. Meeker is now assistant to the general sales manager of the **Macbeth Corp.**

William Johansen, general sales manager, has been elected vice-president in charge of sales for **Magnesium Co. of America.**

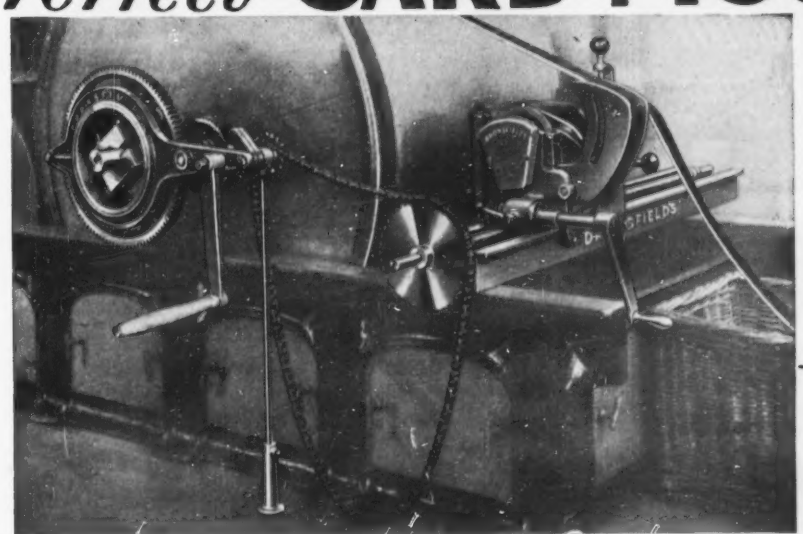
E. Hays Reynolds has been promoted to assistant manager of the textile sales division of **Keever Starch Co.**, Greenville, S. C.

Charles J. Palmer has been appointed southern representative of **Meinhard & Co., Inc.,** and will have offices in the Johnston Building, Charlotte, N. C.

National Starch Products, Inc., has appointed Frank L. Murphy Pacific Coast division manager.

Nichols & Co., Inc., Boston, Mass.,

Perfect CARD MOUNTING



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COTTON
WOOLLEN
WORSTED
WASTE
ASBESTOS
CARDS

Card Mounting Machine Nº 220 with Double Purchase Jack for clothing Card Cylinders and Doffers

SOLE AGENTS FOR DRONSFIELD'S MACHINERY:—
JOHN HETHERINGTON & SONS INC.
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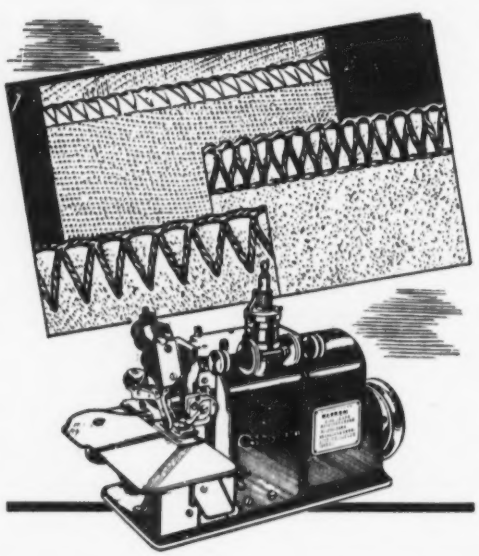
Overseaming · Overedging
Hemming . . .

Merrow Overstitching Machines reflect over 60 years' experience in the manufacture of industrial sewing machines. The term "Merrowing" . . . used throughout the industry to describe overstitching . . . is recognition of this experience and "know-how."
Illustrated are a few of the stitches possible with Merrow Overstitching Machines.
Let us demostrate the work of these machines on swatches of your fabrics.



Free illustrated folder available on request.

TRADE MARK REG
The MERROW
MACHINE COMPANY
2805 LAUREL STREET•HARTFORD•CONN.

wool top maker, has been named selling agent for **James A. Jonas Co.**, New York processor of spun fur fibers.

Edwin T. Dugan and Peter H. B. Cumming, vice-presidents, have been elected to the board of directors of **William Iselin & Co., Inc.** The firm

Mr. Webb

has also announced the appointment of Brainard T. Webb, vice-president, to head new offices in the Palmer Building, Atlanta, Ga.

Murray H. Morse was recently appointed nylon sales manager for **The Chemstrand Corp.** Previous to a year ago, when he joined Chemstrand, Mr. Morse was with the American Viscose Corp. for 22 years. First shipments of the new Chemstrand nylon filament yarn produced in Pensacola, Fla., have been made, and will undergo a series of field evaluations under standard commercial conditions.

C. F. Cline, Jr., has joined the sales staff of **Clinton Foods, Inc.**, corn processing division. His headquarters will be at the firm's Greenville, S. C., office.

Kenneth H. Klipstein has been made general manager of **American Cyanamid Co.'s** newly created research division. Another new division, the organic chemicals division, is headed by L. C. Duncan, with V. E. Atkins as his assistant. This consolidates the activities of the petrochemicals and Calco Chemical divisions. In the fine chemicals division, A. B. Clow is general manager, A. R. Loosli, assistant. J. Allegaert is general manager of the new pigments division, assisted by A. B. Hettrick.

Meade O. Bradshaw, previously with Reeves Pulley Co., is now with the Greenville district office of **The American MonoRail Co.** J. W. Lamprecht has been transferred from Greenville to the Cleveland division office of the firm.

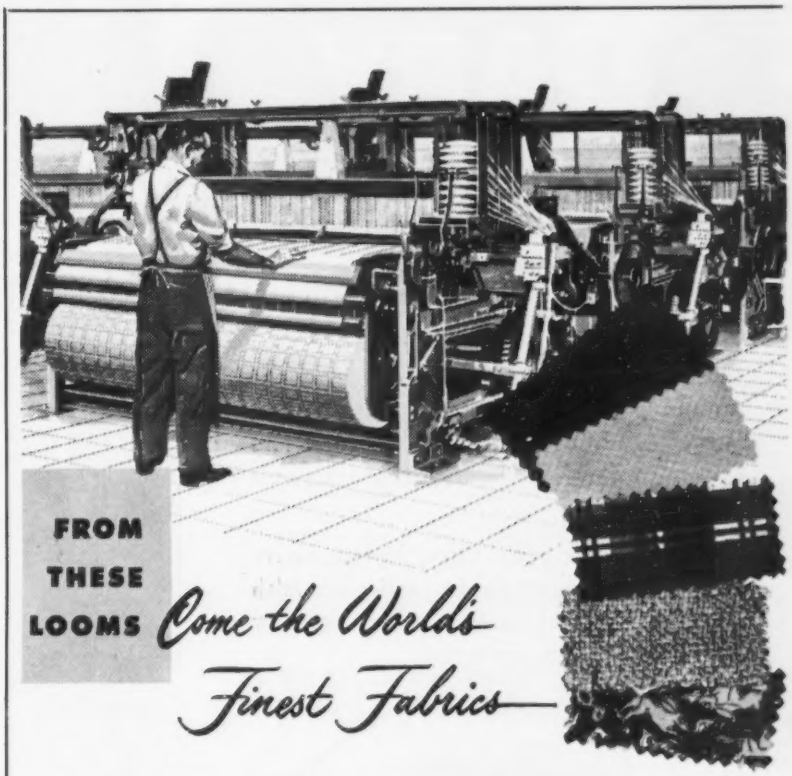
Ralph E. Sexton, with the Sylvania division of **American Viscose Corp.** since 1930, has retired. He is succeeded as manager of the division by Henry W. Dearborn, formerly his assistant.

Nopco Chemical Co. has named **Dillons Chemical Co.** of Montreal and Toronto as exclusive Canadian distributors for Nopco pharmaceutical products. Warehouses will be maintained in both cities.

Thomas W. Allen has retired as president after nearly 48 years with **Proctor & Schwartz, Inc.** Succeeding him is P. Kay Schwartz. Myron T. Fleming is now executive vice-president.

SUPPLIERS News
WHAT THEY ARE DOING

Orr & Sembower, Inc., Reading, Pa., has announced the appointment of Charles M. Setzer & Co., Charlotte, N. C., as sales and service representative handling packaged auto-



Remarkable things are happening in cotton mills.

Cotton manufacturers are constantly developing new ideas, new methods, new finishes that make cotton the pace-setter among fabrics.

The "gray goods" that enter the finishing room emerge as "glamour goods" on the bolt—glazed, sculptured, puckered, polished to satin sheen, or sheer beyond imagining.

And not just glamourous—modern cottons are amazingly practical, too! They can be made water-repellent, wrinkle-shedding, spot-resistant, and shrinkproof. Today's cottons truly are "fabulous fabrics."

The spinning, weaving, and finishing of cotton, one of man's oldest crafts, has taken its place among modern industries. The thoughtful planning of its leaders is maintaining for cotton the world leadership it enjoys among fabrics.

50th ANNIVERSARY ACCO 1904-1954

ANDERSON, CLAYTON & CO.
(INCORPORATED)
HOUSTON • ATLANTA • MEMPHIS • BOSTON
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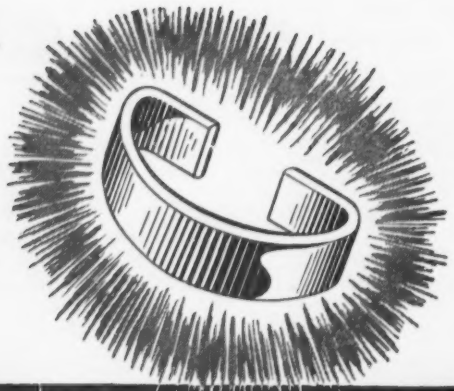
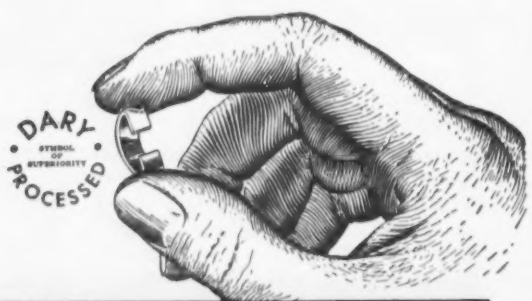


DARY
Ring Travelers

A WELCOME RING

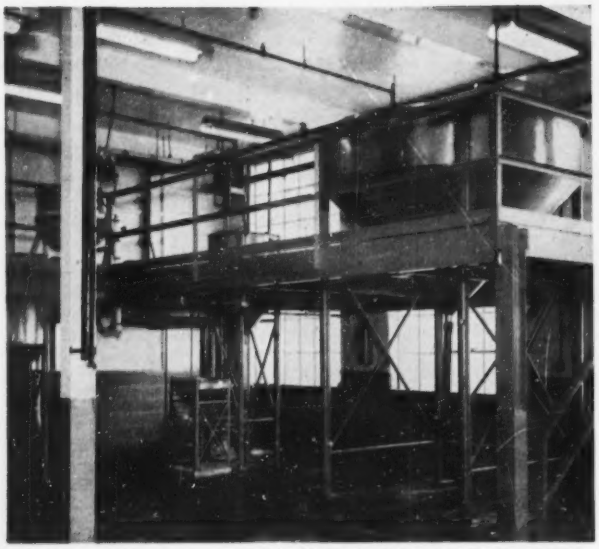
Dary Ring Travelers . . . these words have a welcome ring to millmen throughout the textile industry. For many, many years Dary has meant dependable spinning and twisting performance, however difficult the assignment.

The next time your Dary representative calls, welcome him, for he carries a wealth of experience and offers the finest quality travelers available anywhere.

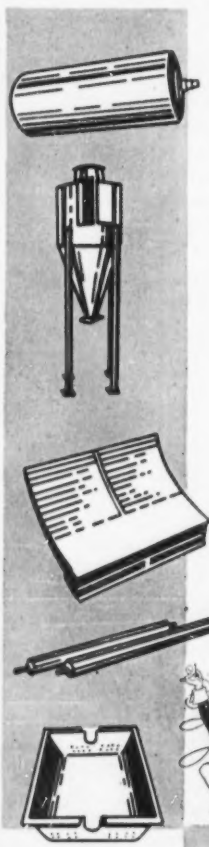


THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS

LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD RHYMER, BOX 2261, GREENVILLE, S. C.



for economy it's STAINLESS STEEL



Down go maintenance and operational costs when you switch to stainless steel! Corrosion, wear and break-down resulting from them are eliminated by the use of this modern wonder metal . . . Consider replacing your old-fashioned hard to clean and maintain pressure vessels, acid tanks, dye vats or starch kettles with SIMS built stainless steel equipment.

for Quality it's SIMS

With one of the most modern and progressive metal working shops in the south, the technical "know-how" of SIMS craftsmen and the SIMS guarantee of quality products, you are assured of equipment built to your *exact* specifications.

For Custom Tailoring of Stainless Steel . . . Call, wire or write today.

FABRICATORS SINCE 1928

Sims METAL WORKS
WEST POINT, GA.

matic boilers in central North Carolina and in northern South Carolina. C. M. Setzer, Jr., is in charge of activities at the Charlotte headquarters, with Rowe A. Mauney operating from Marion, N. C.

Ray L. Freeman has assumed duties of production manager of the **J. C. Paddock Co.**, Spartanburg, S. C. The firm has announced the appointment of **Greenville Textile Supply Co.**, Greenville, S. C., and **Odell Mill Supply Co.**, of Greensboro, N. C., as sales agents for the two Carolinas and Virginia. All other southern states will be covered by the **Morris R. Copeland Co.** of Griffin, Ga., and Chattanooga, Tenn.

A modern metal-working plant at Lancaster, Pa., is now under construction by the **Permutit Co.**, New York. It is expected to cost about $750,000 and will occupy two acres on a site of approximately 30 acres. This move will consolidate activities that have been in plants in Brooklyn, N. Y., and Philadelphia, to effect substantial savings.

A tract of land near Pittsburgh has been purchased by the **Pittsburgh Plate Glass Co.** as the future location for a glass research laboratory devoted to basic and applied research. No construction date has been set.

C. O. Hollen, sales representative of the **Ridge Tool Co.** since 1925, has retired. Replacing him in New Jersey, Pennsylvania east of Lewistown, and Wilmington, Del., is Ralph W. Hamlin. M. B. Williams takes over sales

Mr. Williams

Mr. Hamlin

in the District of Columbia, Maryland, Delaware (except Wilmington), Virginia, and North Carolina.

Reliance Chemicals Corp., Houston, Texas, has added I. J. Wright, Jr., to its staff as an industrial waste application engineer. He was formerly with Crown Central Petroleum Corp.

Wilmer K. Schlotterbeck has been named Buffalo, N. Y., district manager of **Reliance Electric & Engineering Co.** He succeeds C. B. Allen, Jr., transferred to Detroit as district manager. Antony C. Schletter is now Baltimore, Md., branch manager. C. V. Gregory is the new manager of district sales; replacing him as Pittsburgh district manager is Elwood H. Koontz, formerly branch manager at Newark. His duties there are being taken over by F. Raymond Obenchain. New application engineers are: A. W. Bridges and L. W. Kutz, Philadelphia; C. A. Emmert, Baltimore; James W. Landers, Newark; William M. Morris, Jr., New Haven; William J. Constandse, Cincinnati.

SUPPLIERS News
WHAT THEY ARE DOING

John H. Martin, a director of **Sonoco Products Co.** and general production manager, has been elected vice-president. R. A. Terry, formerly chief accountant, is now treasurer. W. A. Biggs, Sonoco's senior salesman, has retired after 34 years with the firm.

L. F. Dommerich & Co., Inc.

Executive and General Offices

271 MADISON AVENUE

NEW YORK 16, N. Y.

Telephone: Murray Hill 3-8650

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For Manufacturers and Merchants

Inquiries as to our services solicited

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BUSINESS ESTABLISHED 1840

Announcing

. . . a new line of

Parks-Cramer FRAME CLEANERS

TYPE CTF-5

For more effective and more thorough automatic cleaning of spinning frames, winders, twisters, and other textile machines.

* * * *

More outlets and at various angles. Individual adjustments for both air velocity and direction.

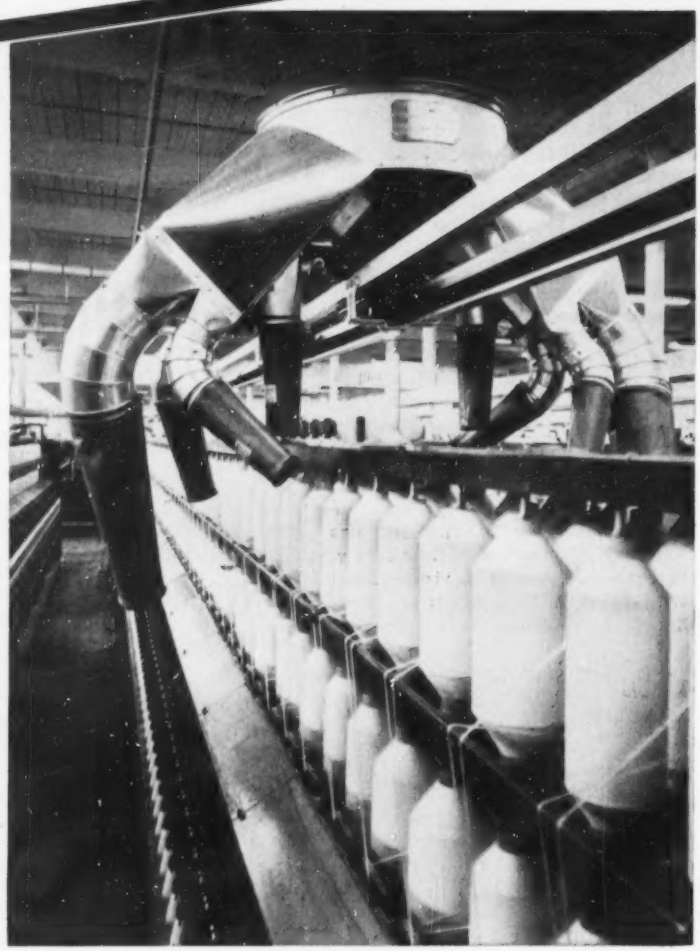
All outlets below head height have flexible cuffs of soft, impregnated fabric.

Versatile. Different air distributors available. Air currents suited to your particular cleaning requirements.

Other features: pressure type fan, stabilizer wheels and guide rolls, ball-bearing mountings, rigid track and track supports. Electric conductors and contacts shielded for safety in protective casing.

For new installations over conventional or large package frames, narrow or wide creels, in tandem with Up-draft Cleaners.

For improving existing Parks-Cramer traveling cleaner systems. Let us suggest needed modifications.



Type CTF-5 Cleaner with style 137 air distributor. Long outlets for spindle rail, ring rail, thread board (whether stationary or traversing), weight hook area, back guides, and creel. Short outlets for stored roving and track.

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C. ATLANTA, GA.

395

Casein Staple Fiber

(Continued from page 105)

dyed colors. It is used only in blends with other fibers for its hand, moisture absorption properties, and for the reduction of static electricity. The fiber is naturally crimped and shrinkproof as well as moth proof.

Charlotte Fibre Co., 661 Spring St., N. W., Atlanta, Ga.

For additional data, request item C-505, using Handy Return Card on page 196.

NEW Equipment AND MATERIALS

Other items are described on pages 101, 103, 105

New Dyestuffs by National Aniline

Solantine Yellow 2RLL, a non-dusting direct dye, produces on cotton or rayon medium yellow shades, stains silk, wool, and nylon, but leaves acetate practically unstained.

Fast Wool Orange FF, a level-dyeing acid dye, produces on wool well-penetrated shades of bright orange. It reserves cotton, viscose and acetate fibers practically white, but stains pure silk and dyes nylon slightly yellower than wool.

Alizarol Cyanone BLL offers the wool dyer a versatile chrome dye producing on wool rather subdued reddish-blue shades. Can be applied by all three chrome dyeing methods.

Orange RF Salt, a stable diazonium color salt, has excellent solubility and produces various shades of orange, yellow, scarlet, and brown when coupled with the appropriate naphthol. Can be applied to cotton and rayon in form of raw stock, yarn, or piece goods.

Carbanthrene Yellow 3GFN Double Paste is a new anthraquinone vat dye producing on cotton and viscose rayon clear shades of golden yellow. Recommended for pressure dyeing and pad jig application.

Solantine Grey GVF is a non-dusting, exceptionally fast to light, direct dye producing on cotton and rayon pleasing shades of blue gray.

Violet BN Salt, a diazo color salt, is applicable to cotton and viscose rayon by all the printing and dyeing processes generally employed for dyes of this type. It produces a yellow on Naphthol AS-G bottom and varying shades of violet and bordeaux with the other naphthols.

Chromolan Green BL, a non-dusting, pre-metallized acid dye, produces on wool bluish-green shades of moderate brightness. Especially recommended for dyeing un-neutralized carbonized pieces and other woolen goods in a highly acidic condition, including materials that have been acid chlorinated.

Red AL Salt, a stable diazonium salt, is used to develop the various National naphthols varying shades of red, scarlet, yellow, and brown. Can be applied to cotton and rayon in form of raw stock, yarn or piece goods, in open tubs, pressure dyeing machinery, on the jig or reel, or by continuous padding method.

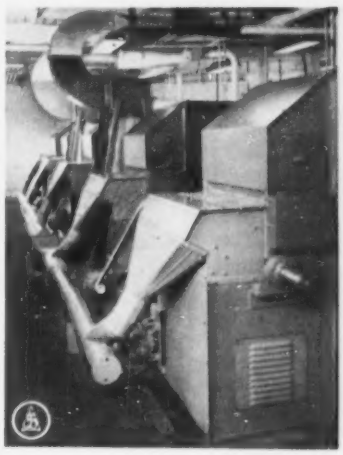
Naccogene Yellow CS Powder, a stabilized azoic dye, produces when printed on cotton and rayon pure greenish shades of yellow.

National Aniline Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.

For additional data, request item C-112, using Handy Return Card on page 196.

F-7 Feeder Attachment for Cleaning Mechanically Harvested Cotton

Grasses, sticks, large leaf particles, and similar impurities found in mechanically harvested cotton are removed when the new Saco-Lowell No. 15 Opener is installed immediately in front of the No. F-7 cleaning and blending feeder. In effect, the opener becomes an integral part of the feeder. Stock processed through the No. 15 opener reaches the card in a condition characterized by more loftiness, less waste, and smaller aggregates.



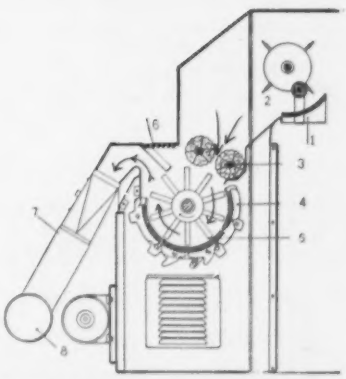
Mill installation photo of No. 15 Openers ➞

The opener consists of a Buckley type beater, 16" in diameter, with 136 hardened steel picks, so arranged that every part of the sheet of cotton delivered to it comes into contact with the picks.

The beater assembly is surrounded by 46 grid bars, adjustable in sets of three. The grid bars are arranged so that they enclose approximately 75% of the circumference of the beater.

Stock from the F-7 feeder immediately enters the beater box of the No. 15 opener where the cleaning operation continues. Leaving the opener, it should be discharged into a closed steel chute which empties into a large conveyor pipe at the terminus of which there is a No. 11 condenser.

Dust and fine linty matter are



PARTS: 1, steel bar cleaning trunk; 2, steel doffer; 3, wooden delivery rolls; 4, adjustable grid bars; 5, No. 15 beater; 6, louvres for air intake; 7, connecting pipe to main trunk; 8, main trunk to No. 11 dust and waste extractor.

"INCREASE IN THE AMOUNT OF WASTE REMOVED AT THE VERTICAL OPENER . . . "

As reported recently in Textile Industries, four Centrif-Air Superior Pre-Openers brought an increase in the amount of waste removed at the vertical opener when installed at Roxboro Cotton Mills, Roxboro, N. C.

According to tests conducted to determine effects of the installation, the machines increased cleaning efficiency approximately 75%.

An increase of 75% in cleaning efficiency can amortize the original cost of Superior Pre-Openers quickly. Write or call today for details.

CENTRIF-AIR
MACHINE COMPANY
880 ASHBY ST., N.W.
ATLANTA, GEORGIA

NEW Equipment AND MATERIALS

drawn into the No. 6 air filter receiving the exhaust from the condenser, and are formed into a filter mat instead of contaminating the air in the room. Also, stock blends better in the air stream than it does on a feed table.

Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

For additional data, request item C-103, using Handy Return Card on page 196.

Nylon Driving Belt Has Greater Strength and Endurance

Gripoly nylon transmission belting consists of a nylon core with an interwoven cotton cover. The cotton provides the belt's grip and nylon its strength and endurance. The belt never loses strength due to decay of the nylon since it is free from microbiological attack.

By concentrating the stress-bearing material of the belt on the neutral axis of bending, great flexibility is achieved, and this is further improved by the type of weave used in the cotton cover. Stretch upon use is much less than with conventional belts, and the new belt holds fasteners better.

Lewis & Taylor Limited, Gripoly Mills, Cardiff, Glam., S. Wales, England.

For additional data, request item C-601, using Handy Return Card on page 196.

Package-Dyed Seaming Yarn in Dunn Colors Provides "Pucker-Free" Appearance

Package-dyed filament nylon seaming yarn in Dunn colors has been placed in commercial production.

Seams in finished hosiery using this yarn have an improved "pucker-free" appearance because there is greater residual shrinkage left in the dyed seaming yarn. As a result, when the hosiery is finish boarded,

U.S. ACME
HORIZONTAL SPOOLER

a simple twist of the wrist sets your production speed!

cleans, winds and oils in one high speed operation

A newly improved, fully modern production unit for accurate, high speed winding of all types of yarn (including fine denier synthetics) on 6 to 24-oz. bobbins. Spindleless construction. Capable of winding from 250 to 750 yards per minute.

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write for complete information and illustrated bulletin

U. S. TEXTILE MACHINE CO.
SCRANTON 8, PENNA.

there is less tendency of the seaming yarn to cause puckers.

Package dyeing of seaming yarn in Dunn colors reduces the variation in the shrinkage coefficients of the dyed seaming yarn and the leg yarn.

The system previously was applied to package dye filament nylon splicing yarn, giving users of the Dunn Method more uniform shrinking with improved stitch construction.

The process is expected to reduce "seconds" and to cut inspection costs.

Central Yarn & Dyeing Co., Gastonia, N. C.

For additional data, request item C-602, using Handy Return Card on page 196.

Plywood Tenter Frame Tube

Light weight and lower cost are principal advantages of a new plywood tenter frame tube or shell. It is made of a cylinder of 3/16" thick three-ply plywood with end plugs of ¾" thick seven-ply plywood.

For installations where the fabric load is heavy, a center plug or support of the same construction as the ends is built into the shell.

Samples for test purposes are available.

Boxall Corp., 9 East 46th St., New York 17, N. Y.

For additional data, request item C-506, using Handy Return Card on page 196.

Wool Oil Booster for More Production, Greater Strength

Increased carding speeds up to 28% and spinning speeds up to 18% have been reported by mills using a new wool oil additive called "Unalube." Poured into the wool oil and water mixture usually on the basis of one part Unalube to three parts oil, the synthetic viscose liquid is credited for improvement in breaking strength of yarns by as much as 14% and reduction of card stripping by 20%.

Other advantages cited include: reduced fly, more uniform and compact roving, loftier and more uniform yarn, treated stock can be left in bins or yarn on spools for long periods of time without drying out, tapes and aprons are not affected, scours out readily, strength gained does not disappear after fabric is finished but is carried through to end product.

According to the producer, Unalube increases fiber parallelization, thereby providing these benefits. Ratio of the additive to wool oil varies with the stock treated and local conditions.

United Aniline Company, 156 Pearl St., Boston, Mass.

For additional data, request item C-115, using Handy Return Card on page 196.

Hunter Tensionless Vapojet Now Available

The Hunter Vapojet Dryer [announced in TI for June, 1953, page 215] is now available in tensionless version which affords complete relaxation warp-wise and filling-wise in cases where framing is not necessary.

The Tensionless Vapojet can be used for shrinking as well as drying any known fabric from terry toweling and denim to plisse. Fabric may be introduced into the dryer at up to one hundred per cent over-feed.

James Hunter Machine Co., North Adams, Mass.

For additional data, request item C-507, using Handy Return Card on page 196.

Rugged Tension Meter for Large Capacity Work

A new Tension Meter covering capacities of 20 pounds and more has been added to the line of Saxl Tension Meters made now by Tensitron, Inc. of Harvard, Mass., under the Saxl patents. It is designed to accommodate ball bearing rollers of any reasonable width so as to measure the tension of rayon tows and similar materials up to 2" wide and also strips of moving picture film, insulated narrow fabric, and paper

Meter measures tension on tow and similar materials (Tensitron).

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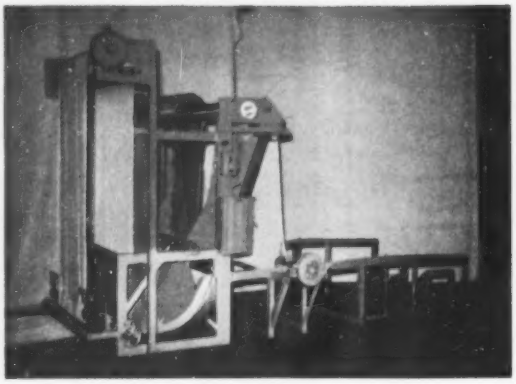
NEW NON-LAPPING NIP ROLLS ON

Mount Hope
CONTINUOUS ROLL FEED



Will not lap or damage any weight or type of fabric at any speed, under continuous high speed production.

New non-lapping Model G Mount Hope Continuous Roll Feed is recommended especially on all print room operations for the following reasons:

1. **Even Tension**
2. **More accurate guiding**
3. **Enables printer to maintain constant speed.**

NOTE: Get your printer's opinion of these advantages.

Ask for complete Editorial Reports *on Continuous Roll Feed applications in printing and tentering, with resultant savings and improved production.*

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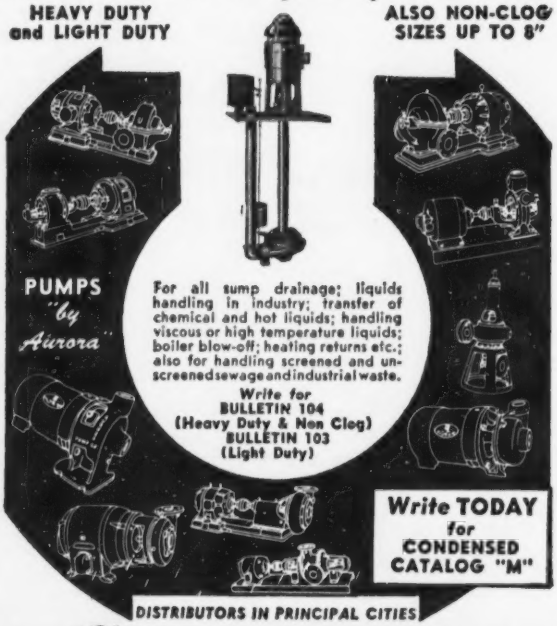

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tape of any reasonable width.

The instrument differs in the design of the movement from prior construction in that the gear train and other sensitive equipment are now entirely omitted. A basically new movement is used, the rugged nature of which makes this large capacity tension meter permanently useful with a minimum of upkeep.

Tensitron, Inc., Harvard, Mass.

For additional data, request item C-508, using Handy Return Card on page 196.

Four Dyeing Assistants of Nonionic Type by Dexter

Four new dyeing assistants of the nonionic type are Telkanol O, Dextrol Fast Salt M, Rexan O, and Telkanite M.

Telkanol O is an effective levelling agent and dyeing assistant for wool, and especially for unions of wool and synthetic fibers such as spun rayon, Orlon, Dacron and nylon, as well as wool and cotton. A strong dispersing action is reported on oils and fats which makes this product an excellent scouring agent in the acid or alkaline scouring of wool and wool wastes. It exhibits high resistance to acids, alkalies, salts, and hard waters.

Dextrol Fast Salt M is a dyeing assistant for acid metallized dyestuffs on wool which reduces the amount of sulfuric acid normally needed, thereby holding to a minimum any loss of tensile strength of the fiber. Dyeing time is cut down, solidity of shades increased, and color fastness improved for perspiration, rubbing, and decatizing.

Level dyeing and penetration with direct, basic, and vat dyestuffs is attributed to *Rexan O* on all fibers except wool. This agent is said to exhibit good wetting powers in dyebaths and eliminates use of glue in vat dyeing and retards rate of exhaustion in the first few minutes without impairing total color yield on the fiber.

Telkanite M is an effective stabilizing agent and assistant for all types of naphthol dyeing and printing. It has high stability and dispersing properties in acid medium which makes it particularly suitable for the

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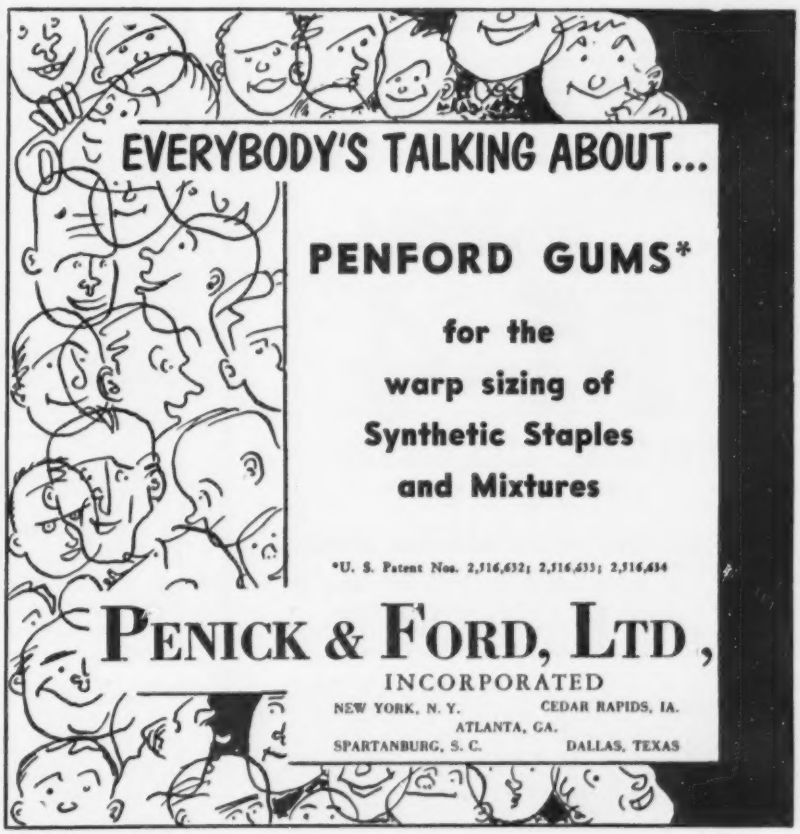

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for the warp sizing of Synthetic Staples and Mixtures

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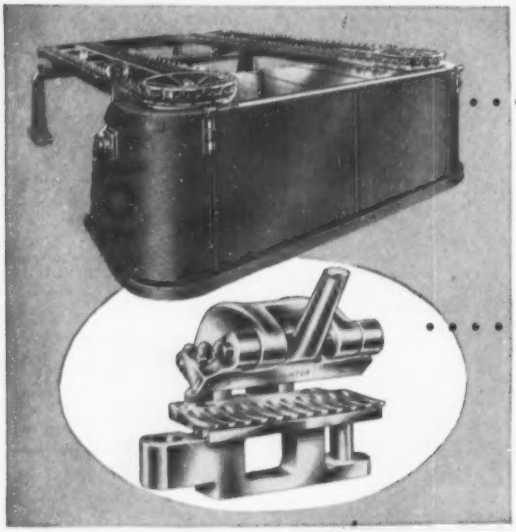

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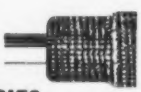

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pasting up and dispersing of bases.

Dexter Chemical Corp., 819 Edgewater Road, New York 59, N. Y.

For additional data, request item C-106, using Handy Return Card on page 196.

15,000-Pound Lift Truck for Rough Terrain

A new 15,000-pound capacity lift truck, the Model RC-150, mounted on 8.25 x 20 pneumatic tires, is powered by a heavy-duty, watercooled, industrial engine and features balanced weight, greater power, and large size

tires, to enable the truck, loaded or unloaded, to negotiate roughest terrain.

Safety, serviceability, operator comfort, and ease of operation are "built in" the new truck. The RC-150 has a capacity of 15,000 pounds at 24-inch load centers.

Other noteworthy features are high degree of visibility, fully roller mounted uprights, extreme braking area, and brute-type body construction.

Hyster Company, Portland 8, Ore.

For additional data, request item C-509, using Handy Return Card on page 196.

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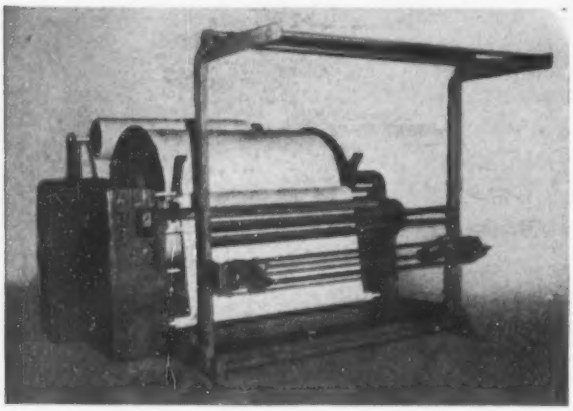

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in only 3 to 10 minutes and can be run wet or dry. Results have been found to agree very well with actual "pilling" in wear. Developed for the U. S. Navy Clothing Supply Office, the machine is known as the Appearance-Retention Tester [TI for December, 1953, page 141].

Test samples, under carefully established conditions, are subjected to a combined rolling and twisting surface action. The test cycle is controlled by an automatic reset electric timer and a simple device permits quick, uniform mounting of samples without tension.

Fabric Development Tests, 185 Twenty-Sixth Street, Brooklyn 32, N. Y.

For additional data, request item C-510, using Handy Return Card on page 196.

Processing Oils Eliminate Soil Removal Problems On Synthetic Fabrics

The answer to critical soil problems in synthetic fabrics is claimed for a new line of processing oils. These oils, Nopco 1056-A, 1056-AR, and 1125-P, all feature a built-in detergent which lifts dirt from the fibers quickly and easily. Each oil is compounded to give the best balance of fiber-to-metal lubrication, adequate antistatic control, and quick spreading action necessary for high-speed equipment.

Nopco 1056-A produces the static-free, even-tension warps which are especially desirable for nylon or acetate tricot. It is recommended as a topping oil for slasher-sized yarns, as an antistatic quilling oil for cops, and as a coning oil for even-density packages.

Nopco 1056-AR is designed for fine denier yarns which demand low tension control.

Nopco 1125-P is used for yarns which will become extremely dirty in processing, such as premium lacemaking where fibers become impregnated with graphite. It is completely self-scouring and requires no additional soap.

Nopco Chemical Co., Harrison, N. J.

For additional data, request item C-105, using Handy Return Card on page 196.

New Laurel Antistatic Agents—

REGENT CONING OIL—
SPINOL RL

give excellent control and lubrication

REGENT CONING OIL—
for Orlon, Dacron, Acrilan, Nylon, and other synthetic filament or spun yarns. Improves uniformity and knitting properties. Also softening agent for after processing.

SPINOL RL—
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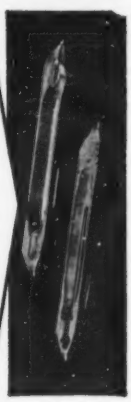

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Atkinson, Haserick & Co., 211 Congress St., Boston 6, Mass.

For additional data, request item C-111, using Handy Return Card on page 196.

Want More Information on These Items?

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The Dobeckmun Co., Cleveland, Ohio (C-206).

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Acheson Colloids Co., Division of Acheson Industries, Inc., Port Huron, Mich. (C-201).

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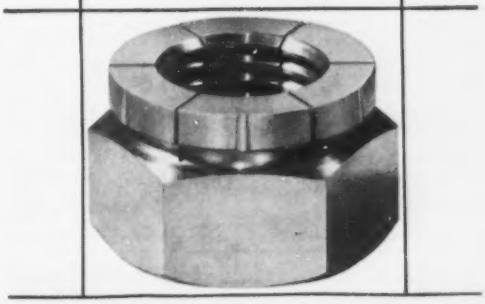

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Eriez Mfg. Co., Erie, Pa. (C-209).

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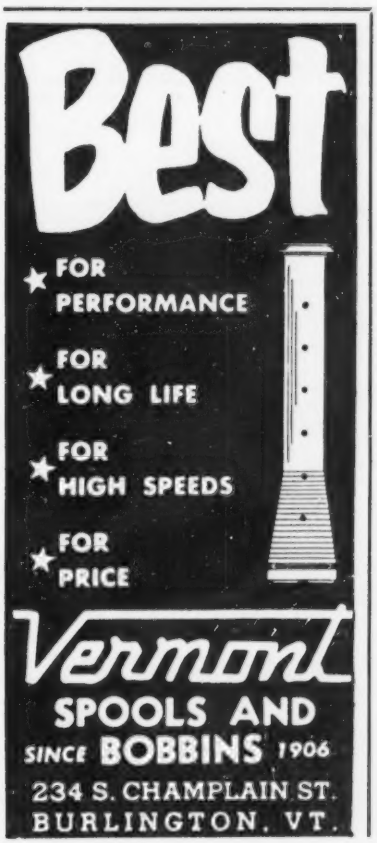

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(Continued from page 113)

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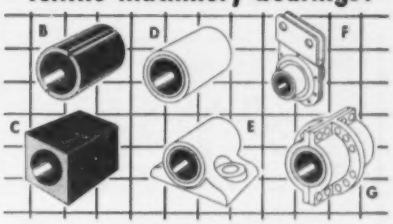

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on the volume of liquor removed. The volume varies according to spray waters, overflows, etc. The cloth may enter either dry or wet and the detergent is best used in conjunction with alkalies in a quantity sufficient to impart best detergency that can be maintained by feed to give pH 9. The latter point is also governed by the acidity of sizes present in the yarns.

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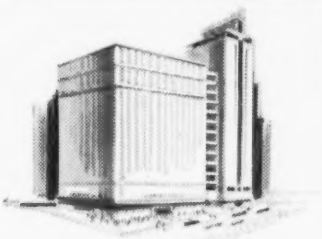

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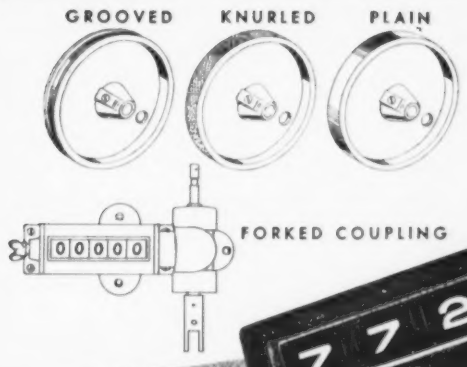

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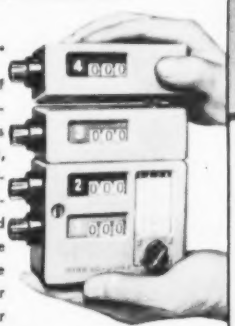

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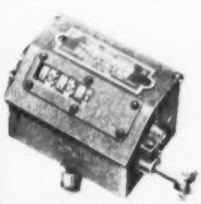

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